

Page 1Lee288

=> file reg  
FILE 'REGISTRY' ENTERED AT 11:19:23 ON 03 SEP 2003  
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Property values tagged with IC are from the ZIC/VINITI data file  
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STRUCTURE FILE UPDATES: 1 SEP 2003 HIGHEST RN 577691-42-0  
DICTIONARY FILE UPDATES: 1 SEP 2003 HIGHEST RN 577691-42-0

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

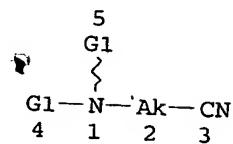
=> file caplus  
FILE 'CAPLUS' ENTERED AT 11:19:26 ON 03 SEP 2003  
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FILE COVERS 1907 - 3 Sep 2003 VOL 139 ISS 10  
FILE LAST UPDATED: 1 Sep 2003 (20030901/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> d que  
L4 SCR 1243  
L9 SCR 1993  
L13 STR



VAR G1=H/CY/AK

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1-X4 C AT 2

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L15 SCR 1609 OR 1597 OR 1568

L17 47968 SEA FILE=REGISTRY SSS FUL L4 AND L9 AND L15 AND L13

L18 20300 SEA FILE=CAPLUS ABB=ON PLU=ON L17

L19 56 SEA FILE=CAPLUS ABB=ON PLU=ON L18(L) (RESIST OR PHOTORESIST)

=> d ti 1-56

L19 ANSWER 1 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Chemically amplified positive resists, micropattern fabrication therewith, and base polymers therefor

L19 ANSWER 2 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Chemical amplification resist material containing fluoropolymer compound and dissolution inhibitor and method of patterning

L19 ANSWER 3 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Polymers, resist compositions and patterning process

L19 ANSWER 4 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Fluorine-containing polymers, resist materials containing the polymers, and pattern formation using the materials

L19 ANSWER 5 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Nitrogen-containing basic chemical compound, resist material, and method of patterning

L19 ANSWER 6 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Silsesquioxanes, their resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance, and their patterning

L19 ANSWER 7 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Light-sensitive resin composition for dry resist film developable with

visible light and resistant towards sand blasting and method for cutting patterned material applied with the same according to sand blasting

L19 ANSWER 8 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Amine compounds, resist compositions and patterning process

L19 ANSWER 9 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Self-assembled monolayer surfaces that resist the adsorption of biological species

L19 ANSWER 10 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI A Survey of Structure-Property Relationships of Surfaces that Resist the Adsorption of Protein

L19 ANSWER 11 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Antireflective coatings comprising polymeric polyoxyalkylenated colorants for use with photoresists

L19 ANSWER 12 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Effect of azo dyes on polyester fabrics for alkaline discharge-resist printing

L19 ANSWER 13 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photopolymerizable composition as dry-film photoresist

L19 ANSWER 14 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photogenerated Base in Polymer Curing and Imaging: Crosslinking of Base-Sensitive Polymers Containing Enolizable Pendent Groups

L19 ANSWER 15 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Colored photosensitive resin composition, colored image-forming material, color filter and its manufacture

L19 ANSWER 16 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Stain-resistant compounds as a mordant for dyeing cellulosic fibers

L19 ANSWER 17 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Water-soluble bisazide-crosslinked photosensitive composition containing alkoxyaminosilane

L19 ANSWER 18 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Additives to photosensitive resins or to undercoat for photosensitive resins

L19 ANSWER 19 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photoresist compositions with high sensitivity, resolution, and thermal stability

L19 ANSWER 20 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Positive-working photoresist compositions

L19 ANSWER 21 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Photosensitive solder resist compositions

L19 ANSWER 22 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Styryl compounds, process for preparing the same and photoresist compositions comprising the same

L19 ANSWER 23 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Functional monomers and polymers CLXVIII. Syntheses and photoreactions of poly(methacrylates) containing thymine bases

L19 ANSWER 24 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Photopolymerizable materials for photoresists and lithographic plates

L19 ANSWER 25 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Photodecolorizing azide-dye compositions and pattern formation using the same

L19 ANSWER 26 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Photopolymerizable recording materials with decreased cold flow

L19 ANSWER 27 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Photoresist materials

L19 ANSWER 28 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Photosensitive compositions

L19 ANSWER 29 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Photoresist compositions

L19 ANSWER 30 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Photoresist compositions

L19 ANSWER 31 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Photoresist material

L19 ANSWER 32 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Novel photoresist compositions

L19 ANSWER 33 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Alkali-discharge-resist dyeing compositions for polyester fibers

L19 ANSWER 34 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Tricyanovinyl dyes for alkali discharge and resist printing

L19 ANSWER 35 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Trihalomethyl group-containing carbonylmethyl heterocycles and photosensitive mixtures containing them

L19 ANSWER 36 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Radiation-sensitive compositions

L19 ANSWER 37 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Tricyanostyryl dyes

L19 ANSWER 38 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Tricyanostyryl dyes

L19 ANSWER 39 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Tricyanostyryl dyes

L19 ANSWER 40 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photosensitive layer transfer material and its use in producing a  
photoresist pattern

L19 ANSWER 41 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photopolymerizable copying materials

L19 ANSWER 42 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI 10-Phenyl-1,3,9-triazaanthracenes and photopolymerizable mixture  
containing them

L19 ANSWER 43 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photopolymerizable composition and copying material from it

L19 ANSWER 44 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Disazo dyes for polyester fibers

L19 ANSWER 45 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Discharge-resist prints on textile materials

L19 ANSWER 46 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Radiation-polymerizable mixture and its use in preparing radiation  
sensitive copying material

L19 ANSWER 47 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photopolymerizable mixture and its use in preparing photopolymerizable  
copying material

L19 ANSWER 48 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Discharge-resist dyeing of polyester fibers

L19 ANSWER 49 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photopolymerizable mixture

L19 ANSWER 50 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Radiation-sensitive copying composition

L19 ANSWER 51 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photopolymerizable mixture

L19 ANSWER 52 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photopolymerizable mixture

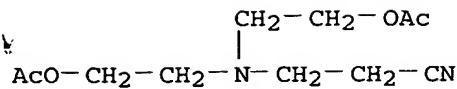
L19 ANSWER 53 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

TI Photosensitive compositions and their applications  
L19 ANSWER 54 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Transferable photoresist  
L19 ANSWER 55 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photoresist compositions  
L19 ANSWER 56 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Synthesis and study of some characteristics of monoazo dyes which contain nitril groups

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L19 ANSWER 1 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2003:371834 CAPLUS  
DOCUMENT NUMBER: 138:376422  
TITLE: Chemically amplified positive resists, micropattern fabrication therewith, and base polymers therefor  
INVENTOR(S): Hatakeyama, Jun; Watanabe, Osamu; Takeda, Takanobu  
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003140350	A2	20030514	JP 2001-341513	20011107
PRIORITY APPLN. INFO.:			JP 2001-341513	20011107
AB Polymers having terminal group R <sub>1</sub> CO <sub>2</sub> R <sub>2</sub> (R <sub>1</sub> = single bond, C <sub>1</sub> -10 alkylene, C <sub>6</sub> -10 arylene; R <sub>2</sub> = acid-labile group), resists contg. the polymers and optionally basic compds., and micropattern fabrication on the resist layers high-energy or electron beams are sep. claimed. Resoln., etching resistance, and pattern profile of resist layers are greatly improved. The micropatterning is useful for manuf. of ultralarge-stale integrated circuits, etc.				
IT	449165-34-8			
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (dissoln. promoters; resoln.-improved chem. amplified pos. resists contg. hydroxystyrene polymers having acid-labile terminal groups)				
RN	449165-34-8	CAPLUS		
CN	Propanenitrile, 3-[bis[2-(acetyloxy)ethyl]amino]- (9CI) (CA INDEX NAME)			



IC ICM G03F007-039  
ICS C08F008-00; C08F012-22; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38, 76  
ST acid labile terminal amplified resist resoln profile; methylcyclopentyl terminated trimethylsiloxy styrene polymer hydrolyzed resist base; etching resistance radiation sensitive amplified resist  
IT Resists  
(pos.-working, radiation-sensitive, chem. amplified; resoln.-improved chem. amplified pos. resists contg. hydroxystyrene polymers having acid-labile terminal groups)  
IT Resists  
(radiation-sensitive, pos.-working; resoln.-improved chem. amplified pos. resists contg. hydroxystyrene polymers having acid-labile terminal groups)  
IT Polymerization inhibitors  
(shortstopping agents, acid labile group-contg.; resoln.-improved chem. amplified pos. resists contg. hydroxystyrene polymers having acid-labile terminal groups)  
IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine 3002-18-4  
211919-60-7 449165-34-8  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(dissoln. promoters; resoln.-improved chem. amplified pos. resists contg. hydroxystyrene polymers having acid-labile terminal groups)  
IT 74508-34-2DP, acid labile group-terminated, hydrolyzed  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(resoln.-improved chem. amplified pos. resists contg. hydroxystyrene polymers having acid-labile terminal groups)  
IT 109-92-2DP, Ethyl vinyl ether, reaction products with hydrolyzed and terminated trimethylsiloxy styrene polymers 3891-33-6DP, Butanediol divinyl ether, reaction products with hydrolyzed and terminated trimethylsiloxy styrene polymers 24424-99-5DP, Di-tert-butyl dicarbonate, reaction products with hydrolyzed and terminated trimethylsiloxy styrene polymers  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(resoln.-improved chem. amplified pos. resists contg. hydroxystyrene polymers having acid-labile terminal groups)  
IT 522656-29-7  
RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(shortstops; nod oresoln.-improved chem. amplified pos. resists contg. hydroxystyrene polymers having acid-labile terminal groups)

IT 15403-87-9D, 5-Bromonorbornene, butoxycarbonyl-, tert-butoxycarbonylmethyl-substituted products 55666-43-8, tert-Butyl 3-bromopropionate  
 197792-52-2 199438-09-0 522653-85-6 522656-31-1  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (shortstops; resoln.-improved chem. amplified pos. resists contg. hydroxystyrene polymers having acid-labile terminal groups)

L19 ANSWER 2 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:275109 CAPLUS

DOCUMENT NUMBER: 138:311562

TITLE: Chemical amplification resist material containing fluoropolymer compound and dissolution inhibitor and method of patterning

INVENTOR(S): Hatakeyama, Jun; Harada, Yuji; Kawai, Yoshio; Sasako, Masaru; Endo, Masataka; Kishimura, Shinji; Otani, Michitaka; Komoritani, Haruhiko; Maeda, Kazuhiko

PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan; Matsushita Electric Industrial Co., Ltd.; Central Glass Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.

CODEN: JKXXAF

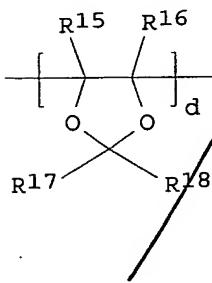
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

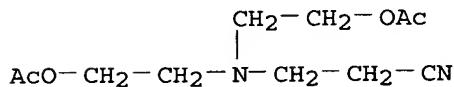
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003107706	A2	20030409	JP 2001-296608	20010927
PRIORITY APPLN. INFO.:			JP 2001-296608	20010927
OTHER SOURCE(S):	MARPAT 138:311562			
GI				



AB The chem. amplification resist material comprises (A) a polymer compd. contg. .gtoreq.1 F and (B) a dissoln. inhibitor represented by R4 (-R3CR1R2OR5)n (R1,2 = H, F, C1-4 alkyl, etc.; R3 = single bond, C1-4

alkylene; R4 = n-valent C4-40 arom. group or cyclic diene; R5 = acid unstable group; and n = 2, 3, 4), (C) an org. solvent, and (D) an acid generator. The component (A) may be represented by (R7R9C-CR8R10)a, [R11C(C(:O)OR12)-CH2]b, [R13C(C(:O)OR14)-CH2]c, or I (R7-11 = H, F, trifluoromethyl; R12 = C1-20 alkyl; R13 = trifluoromethyl; R14 = acid unstable group; R15,16 = H, F; R17,18 = Me, trifluoromethyl; and at least one of R15-18 contains F). The chem. amplification resist material further contains a basic compd. The process using a F2 laser or an Ar2 laser is also claimed.

IT 449165-34-8  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (basic compd.; chem. amplification **resist** material contg.  
 fluoropolymer compd. and dissoln. inhibitor)  
 RN 449165-34-8 CAPLUS  
 CN Propanenitrile, 3-[bis[2-(acetyloxy)ethyl]amino]- (9CI) (CA INDEX NAME)



IC ICM G03F007-039  
 ICS G03F007-004; G03F007-38; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 ST chem amplification resist photoresist fluoropolymer dissoln inhibitor  
 IT Photoresists  
 Resist  
 (patterning of chem. amplification resist material contg. fluoropolymer compd. and dissoln. inhibitor)  
 IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine 3002-18-4  
 211919-60-7 449165-34-8  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (basic compd.; chem. amplification **resist** material contg.  
 fluoropolymer compd. and dissoln. inhibitor)  
 IT 117458-06-7 153821-77-3 508217-87-6 508217-88-7 508217-89-8  
 508217-90-1 508217-92-3 508217-94-5 508217-96-7 508217-98-9  
 508218-00-6 508218-01-7 508218-02-8 508218-03-9 508218-04-0  
 508218-05-1 508218-06-2 508218-07-3 508218-08-4  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (dissoln. inhibitor; chem. amplification resist material contg.  
 fluoropolymer compd. and dissoln. inhibitor)  
 IT 475471-96-6 508217-81-0 508217-82-1 508217-83-2 508217-84-3  
 508217-86-5  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (fluoropolymer; chem. amplification resist material contg.  
 fluoropolymer compd. and dissoln. inhibitor)  
 IT 144317-44-2  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoacid; chem. amplification resist material contg. fluoropolymer

compd. and dissoln. inhibitor)

L19 ANSWER 3 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2003:118461 CAPLUS  
 DOCUMENT NUMBER: 138:161086  
 TITLE: Polymers, resist compositions and patterning process  
 INVENTOR(S): Hatakeyama, Jun; Harada, Yuji; Kawai, Yoshio; Sasago, Masaru; Endo, Masayuki; Kishimura, Shinji; Ootani, Michitaka; Miyazawa, Satoru; Tsutsumi, Kentaro; Maeda, Kazuhiko  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: U.S. Pat. Appl. Publ., 24 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

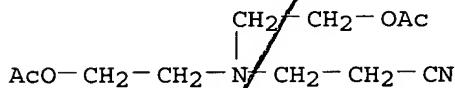
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003031953	A1	20030213	US 2002-178638	20020625
JP 2003082030	A2	20030319	JP 2002-182417	20020624

PRIORITY APPLN. INFO.: JP 2001-190630 A 20010625

AB A ternary copolymer comprising units of  $\alpha$ -trifluoro-methylacrylic carboxylate having acid labile groups substituted thereon, units of  $\alpha$ -trifluoromethylacrylic carboxylate having adhesive groups substituted thereon, and units of styrene having hexafluoroalc. pendants is highly transparent to VUV radiation and resistant to plasma etching. A resist compn. using the polymer as a base resin is sensitive to high-energy radiation below 200 nm, has excellent sensitivity, and is suited for lithog. microprocessing.

IT 449165-34-8  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (basic compd.; photoresist compns. for patterning process  
 contg.)

RN 449165-34-8 CAPLUS  
 CN Propanenitrile,  $\beta$ -[bis[2-(acetoxy)ethyl]amino]- (9CI) (CA INDEX NAME)



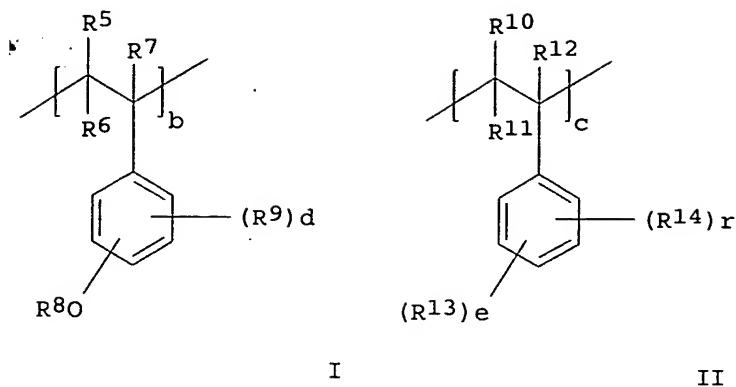
IC ICM G03F007-038  
 ICS G03F007-38; G03F007-40  
 NCL 430270100; 430311000; 430330000; 430905000  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST Polymers photoresist compn patterning photolithog  
 IT Photolithography  
 Photoresists

(photoresist compns. for patterning process)  
IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine 3002-18-4  
211919-60-7 449165-34-8  
RL: TEM (Technical or engineered material use); USES (Uses)  
(basic compd.; photoresist compns. for patterning process  
contg.)  
IT 139254-88-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(inhibitor; photoresist compns. for patterning process contg.)  
IT 496861-42-8P 496861-43-9P 496861-44-0P 496861-45-1P 496861-47-3P  
496861-48-4P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(photoresist compns. for patterning process contg.)

L19 ANSWER 4 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:15519 CAPLUS  
DOCUMENT NUMBER: 138:98187  
TITLE: Fluorine-containing polymers, resist materials  
containing the polymers, and pattern formation using  
the materials  
INVENTOR(S): Harada, Yuji; Hatakeyama, Jun; Kawai, Yoshio; Sasako,  
Masaru; Endo, Masataka; Kishimura, Shinji; Otani,  
Michitaka; Miyazawa, Satoru; Tsutsumi, Kentaro; Maeda,  
Kazuhiko  
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan;  
Matsushita Electric Industrial Co., Ltd.; Central  
Glass Co., Ltd.  
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003002925	A2	20030108	JP 2001-190647	20010625
US 2003031952	A1	20030213	US 2002-178475	<u>20020625</u>
PRIORITY APPLN. INFO.:			JP 2001-190647	A 20010625



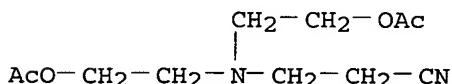
AB The polymers have  $[CR_1R_2CR_3(CO_2R_4)]_a$  [ $R_1, R_2 = H, F, C_1-20$  (fluoro)alkyl, (fluoro)cycloalkyl;  $R_3 = F, C_1-20$  fluoroalkyl, fluorocycloalkyl;  $R_4 = H$ , acid-labile group;  $0 < a < 1$ ], hydroxystyrene-derived unit I [ $R_5-R_7 =$  ant group given for  $R_1$ ;  $R_8 = H$ , acid-labile group;  $R_9 = F, C_1-20$  (fluoro)alkyl, (fluoro)cycloalkyl;  $0 < b < 1$ ;  $d = 1-4$ ], and optionally styrene-derived unit II [ $R_{10}-R_{12} =$  any group given for  $R_1$ ;  $R_{13} = C(CF_3)2OR_{15}$  ( $R_{15} = H$ , acid-labile group);  $R_{14} =$  any group given for  $R_9$ ;  $0.1t_{oreq.} < 1$ ;  $e, f = 0-5$  and  $1.1t_{oreq.} < e + f < 1.1t_{oreq.} 5$ ], where  $0 < a + b + c < 1$ , and show wt. av. mol. wt. 1000-500,000. Also claimed are resist materials contg. the polymers, chem.-amplified pos. resist materials contg. the polymers, org. solvents, photoacid generators, and optionally basic compds. and dissoln. inhibitors. Resist pattern is formed by coating a substrate with the resist materials, heating the substrate and exposing the resist film to 100-180-nm or 1-30-nm high energy beam using a photomask, and developing the resist film after heating if necessary. The resist materials are transparent to vacuum UV such as  $F_2$  layer (157 nm), etc., and show good resoln., adhesion to a substrate, and resistance to plasma etching.

IT 449165-34-8

RL: TEM (Technical or engineered material use); USES (Uses)  
(acid diffusion controller; prepn. of F-contg. polymers having acrylic acid unit and (hydroxy)styrene unit for vacuum UV-sensitive resists with high resoln., good adhesion to substrate, and plasma etching resistance)

RN 449165-34-8 CAPLUS

CN Propanenitrile, 3-[bis[2-(acetyloxy)ethyl]amino]- (9CI) (CA INDEX NAME)

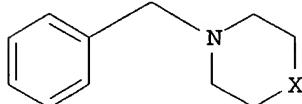


IC ICM C08F212-14  
ICS C08F220-04; C08F220-22; G03F007-004; G03F007-039; G03F007-38;  
H01I021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38  
ST chem amplified pos resist fluoromethylacrylate fluoromethylhydroxystyrene copolymer  
IT Photoresists  
(F2 laser-sensitive; prepn. of F-contg. polymers having acrylic acid unit and (hydroxy)styrene unit for resists with sensitivity to vacuum UV, high resoln., adhesion to substrate, and plasma etching resistance)  
IT Positive photoresists  
(prep. of F-contg. polymers having acrylic acid unit and (hydroxy)styrene unit for resists with sensitivity to vacuum UV, high resoln., adhesion to substrate, and plasma etching resistance)  
IT X-ray resists  
(soft x-ray; prep. of F-contg. polymers having acrylic acid unit and (hydroxy)styrene unit for resists with sensitivity to vacuum UV, high resoln., adhesion to substrate, and plasma etching resistance)  
IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine 3002-18-4  
211919-60-7 449165-34-8  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acid diffusion controller; prep. of F-contg. polymers having acrylic acid unit and (hydroxy)styrene unit for vacuum UV-sensitive resists with high resoln., good adhesion to substrate, and plasma etching resistance)  
IT 139254-88-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(dissoln. retardant; prep. of F-contg. polymers having acrylic acid unit and (hydroxy)styrene unit for vacuum UV-sensitive resists with high resoln., good adhesion to substrate, and plasma etching resistance)  
IT 66003-76-7, Diphenyliodonium triflate 66003-78-9, Triphenylsulfonium triflate  
RL: CAT (Catalyst use); USES (Uses)  
(photoacid generator; prep. of F-contg. polymers having acrylic acid unit and (hydroxy)styrene unit for vacuum UV-sensitive resists with high resoln., good adhesion to substrate, and plasma etching resistance)  
IT 349-59-7DP, 3,5-Bis(trifluoromethyl)styrene-, polymer with bis(trifluoromethyl)-p-hydroxystyrene and tert-Bu .alpha.-trifluoromethyl acrylate 2386-82-5DP, polymer with fluorostyrene derivs.  
105935-24-8DP, polymer with bis(trifluoromethyl)-p-hydroxystyrene  
105935-24-8DP, tert-Butyl .alpha.-trifluoromethyl acrylate, polymer with bis(trifluoromethyl)-p-hydroxystyrene and 3,5-Bis(trifluoromethyl)styrene  
105935-24-8DP, tert-Butyl .alpha.-trifluoromethyl acrylate, polymer with fluorostyrene derivs.  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(prep. of F-contg. polymers having acrylic acid unit and (hydroxy)styrene unit for vacuum UV-sensitive resists with high resoln., good adhesion to substrate, and plasma etching resistance)

ACCESSION NUMBER: 2002:958627 CAPLUS  
 DOCUMENT NUMBER: 138:47303  
 TITLE: Nitrogen-containing basic chemical compound, resist material, and method of patterning  
 INVENTOR(S): Hatakeyama, Jun; Watanabe, Takeshi; Nagata, Takashi; Maeda, Kazuki; Nishi, Tsunehiro  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

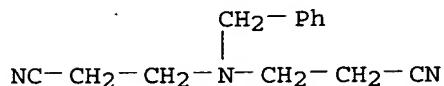
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002363146	A2	20021218	JP 2001-164043	20010531
PRIORITY APPLN. INFO.:			JP 2001-164043	20010531
GI				



I

AB The N-contg. basic compd. is represented by [Ph-CH2]<sub>a</sub>-N-[CH<sub>2</sub>CH<sub>2</sub>COOR<sub>0</sub>]<sub>b</sub>, [Ph-CH2]<sub>a</sub>-N-[CH<sub>2</sub>CH<sub>2</sub>CN]<sub>b</sub>, or I (R<sub>0</sub> = C<sub>1-6</sub> alkyl, OH, etc.; a = 1, 2; b = 1, 2; and a + b = 3; X = O, S). The resist material contg. the basic compd. is also claimed. The patterning process using a high energy ray (ltoreq. 300 nm or an electron beam is also claimed. An addn. of the basic compd. in the resist material provided a broader focus margin and a high contrast.

IT 782-87-6P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepn. of N-contg. basic compd. for resist material)  
 RN 782-87-6 CAPLUS  
 CN Propanenitrile, 3,3'-(phenylmethyl)imino]bis- (9CI) (CA INDEX NAME)



IC ICM C07C215-12  
 ICS C07C217-64; C07C219-06; C07C229-14; C07C255-24; C07D295-02;

G03F007-004; G03F007-038; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 23

ST nitroge basic chem compd resist patterning; photoresist basic compd; electron beam resist basic compd

IT Electron beam resists  
 Photoresists  
 Resists  
 (N-contg. basic compd. for resist and method of patterning)

IT 51-67-2, 2-p-Hydroxyphenylethylamine 80-62-6, Methyl methacrylate 100-39-0, Benzyl bromide 107-13-1, Acrylonitrile, reactions 108-24-7, Acetic anhydride 110-91-8, Morpholine, reactions 111-42-2, Diethanolamine, reactions 111-95-5 121-44-8, Triethylamine, reactions 140-88-5, Ethyl acrylate 877-88-3, 3,5-Dimethoxybenzylbromide 2393-23-9, p-Methoxybenzylamine 18638-99-8, 3,4,5-Trimethoxybenzylamine  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of N-contg. basic compd. for resist material)

IT 101-32-6P, (N-Benzyl\_diethanolamine  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. of N-contg. basic compd. for resist material)

IT 92-53-5P, N-Phenylmorpholine 782-87-6P 793-19-1P  
 10316-00-4P, N-Benzylmorpholine 106193-77-5P 144576-46-5P  
 478407-90-8P 478407-91-9P 478407-92-0P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepn. of N-contg. basic compd. for resist material)

L19 ANSWER 6 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:886192 CAPLUS  
 DOCUMENT NUMBER: 137:377443  
 TITLE: Silsesquioxanes, their resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance, and their patterning  
 INVENTOR(S): Hatakeyama, Jun; Sasako, Masaru; Endo, Masataka; Kishimura, Shinji; Otani, Michitaka; Miyazawa, Satoru; Tsutsumi, Kentaro; Maeda, Kazuhiko  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan; Matsushita Electric Industrial Co., Ltd.; Central Glass Co., Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002332353	A2	20021122	JP 2001-140891	20010511
PRIORITY APPLN. INFO.:			JP 2001-140891	20010511

AB The silsesquioxanes for resist materials involve mer units represented by  $[Si(R1CO2R3)O3/2]a$  and  $[Si[R2(CN)c]O3/2]b$  [R1 = C3-20 cyclic hydrocarbylene which may be bridged or contain hetero arom such as O and S or CN; R2 = C3-20 cyclic (c + 1)-valent hydrocarbyl which may be bridged or contain hetero atom such as O and S; R3 = acid-labile group; a, b > 0; c = 1-4 integer]. The silsesquioxanes are preferably compounded with org. solvents, acid generators, and optionally bases and dissoln. inhibitors to give chem.-amplified resist materials. These resist materials are applied on substrates, heated, exposed to high-energy ray with wavelength  $\lambda \geq 300$  nm or electron beam via photomasks, post-baked as required, and developed by using developers. After the patterning, underlayers are etched by O plasma or Cl- or Br-contg. halogen gases.

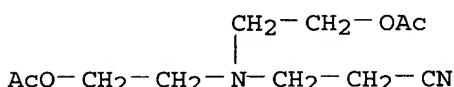
IT 449165-34-8

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(base; in silsesquioxane-based pos. resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance)

RN 449165-34-8 CAPLUS

CN Propanenitrile, 3-[bis[2-(acetyloxy)ethyl]amino]- (9CI) (CA INDEX NAME)



IC ICM C08G077-26

ICS C08K005-00; C08L083-08; G03F007-004; G03F007-039; G03F007-40; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

ST carboxyl cyano pendant silsesquioxane chem amplified resist; vacuum UV resist carboxyl cyano pendant silsesquioxane; DUV resist pos carboxyl cyano pendant silsesquioxane; photoresist pos carboxyl cyano pendant silsesquioxane

IT Positive photoresists

(UV; silsesquioxanes for pos. resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance)

IT Silsesquioxanes

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(bearing carboxyl and cyano pendants; silsesquioxanes for pos. resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance)

IT Amines, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

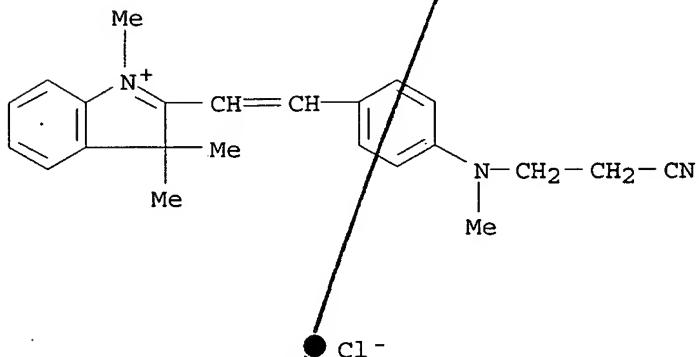
(resist materials contg.; in silsesquioxane-based pos. resist materials having good transmissivity to vacuum UV and soft x-ray and excellent

etching resistance).  
IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine 3002-18-4  
211919-60-7 449165-34-8  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(base; in silsesquioxane-based pos. resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance)  
IT 139254-88-9  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(dissoln. inhibitor; in silsesquioxane-based pos. resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance)  
IT 95-11-4, Bicyclo[2.2.1]hept-5-ene-2-carbonitrile 15507-83-2 51252-31-4  
154970-45-3 260543-69-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(monomer prepn. from; silsesquioxanes for pos. resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance)  
IT 365546-65-2P 475562-43-7P 475572-64-6P 475572-65-7P 475572-66-8P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(monomer; silsesquioxanes for pos. resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance)  
IT 66003-76-7 66003-78-9  
RL: CAT (Catalyst use); USES (Uses)  
(photoacid generator; in silsesquioxane-based pos. resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance)  
IT 475562-44-8P 475572-67-9P 475572-68-0P 475572-69-1P 475572-70-4P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(silsesquioxanes for pos. resist materials having good transmissivity to vacuum UV and soft x-ray and excellent etching resistance)

L19 ANSWER 7 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2002:748357 CAPLUS  
DOCUMENT NUMBER: 137:286436  
TITLE: Light-sensitive resin composition for dry resist film developable with visible light and resistant towards sand blasting and method for cutting patterned material applied with the same according to sand blasting  
INVENTOR(S): Ueda, Shoji  
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002287349	A2	20021003	JP 2001-87807	20010326
PRIORITY APPLN. INFO.:			JP 2001-87807	20010326
OTHER SOURCE(S):		MARPAT 137:286436		
AB	The title compn. contains a photopolymerizable urethane (meth)acrylate having .gtreq.2 (meth)acryloyl groups, an alkali solubilizable resin of 50-250 mg/KOH acid value, a borate compd., and a sensitizer dye, wherein the borate compd. has structure (R1)(R2)(R3)(R4) B-.cntdot.Z ( R1-4 = alkyl, alkenyl, aryl, etc.; Z = quaternary ammonium, quaternary pyridinium, quaternary quinolinium). The compn. provides photoresist is directly patterned with a laser beam and shows the good resistance towards sand blasting to cut a patterned mother substrate with sand blasting.			
IT	12217-48-0, Basic Red 14 RL: TEM (Technical or engineered material use); USES (Uses) (sensitizing dye; light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting)			
RN	12217-48-0 CAPLUS			
CN	3H-Indolium, 2-[2-[4-[(2-cyanoethyl)methylamino]phenyl]ethenyl]-1,3,3-trimethyl-, chloride (9CI) (CA INDEX NAME)			



IC ICM G03F007-029  
ICS C08F002-44; C08F002-50; C08F283-00; C08F290-00; C08F299-06;  
C08K005-00; C08K005-55; C08L075-14; C08L101-00; G03F007-004;  
G03F007-027; G03F007-031; G03F007-032; G03F007-40  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST light sensitive resin compn dry resist film sand blasting  
IT Light-sensitive materials  
Photoresists  
Sandblasting  
(light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting and method for cutting material applied with same according to sand blasting)

IT 9004-38-0, KC 71 9050-31-1, HP 55 25086-15-1, Methacrylic acid/methyl methacrylate copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(alkali polymerizable resin; light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting)

IT 118996-06-8 120307-06-4, Tetrabutylammonium butyltriphenylborate  
211675-36-4, Tetrabutylammonium butyltri(4-methyl-1-naphthyl)borate  
219125-19-6, Tetrabutylammonium butyltri(1-naphthyl)borate 219125-21-0  
219125-22-1, 3,7-Diamino-2,8-dimethyl-5-phenylphenazinium tetrafluoroborate  
RL: CAT (Catalyst use); USES (Uses)  
(borate compd.; light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting)

IT 989-38-8, Basic Red 1 4657-00-5, Basic Orange 22 12217-48-0,  
Basic Red 14  
RL: TEM (Technical or engineered material use); USES (Uses)  
(sensitizing dye; light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting)

IT 178359-46-1, KRM 7222 190673-86-0, Shikoh UV 9510EA 216680-53-4, UAS-C  
9PMA 216680-57-8, Shikoh UT 2313 216680-60-3, Shikoh UV 9532  
RL: TEM (Technical or engineered material use); USES (Uses)  
(urethane acrylate; light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting)

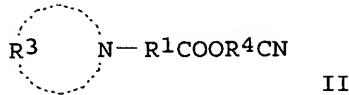
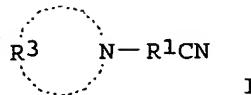
L19 ANSWER 8 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:638186 CAPLUS  
DOCUMENT NUMBER: 137:192762  
TITLE: Amine compounds, resist compositions and patterning process  
INVENTOR(S): Hatakeyama, Jun; Kobayashi, Tomohiro; Watanabe, Takeru  
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
SOURCE: U.S. Pat. Appl. Publ., 40 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002115018	A1	20020822	US 2001-3288	20011206
JP 2002249478	A2	20020906	JP 2001-369719	20011204
PRIORITY APPLN. INFO.:			JP 2000-373316	A 20001207

OTHER SOURCE(S): MARPAT 137:192762

GI



AB Amine compds. having a cyano group are useful in resist compns. for preventing a resist film from thinning and also for enhancing the resoln. and focus margin of resist. The invention amine compds. have general formulas:  $(\text{R}^2)_b\text{N}-(\text{R}^1\text{CN})_a$ ; I;  $(\text{R}^2)_b\text{N}-(\text{R}^1\text{C}(=\text{O})\text{OR}^4\text{CN})_a$ ; II ( $\text{R}^1, 4 = \text{C}1-4$  alkylene;  $\text{R}^2 = \text{C}1-20$  cycloc alkyl which may contain a hydroxy group, ether, carbonyl, ester, lactone ring, carbonate, cyano group;  $\text{R}^3 = \text{C}2-20$  alkylene which may contain hydroxy, ether, thioether, carbonyl, ester, thioester group, carbonate;  $a = 1-3$ ;  $a+b = 3$ ).

IT 3010-02-4P 86071-97-8P 449165-34-8P

449165-36-0P 449165-43-9P 449165-45-1P

449165-48-4P 449165-90-6P 449165-92-8P

449165-93-9P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(amine compds. and photoresist compns. for patterning process)

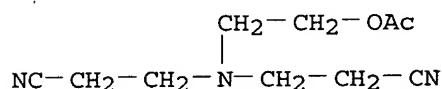
RN 3010-02-4 CAPPLUS

CN Acetonitrile, (diethylamino)- (8CI, 9CI) (CA INDEX NAME)

$\text{Et}_2\text{N}-\text{CH}_2-\text{CN}$

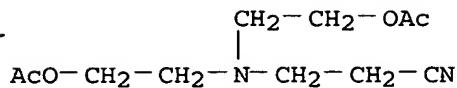
RN 86071-97-8 CAPPLUS

CN Propanenitrile, 3,3'-[ [2-(acetyloxy)ethyl]imino]bis- (9CI) (CA INDEX NAME)

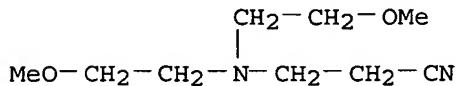


RN 449165-34-8 CAPPLUS

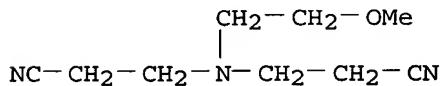
CN Propanenitrile, 3-[bis[2-(acetyloxy)ethyl]amino]- (9CI) (CA INDEX NAME)



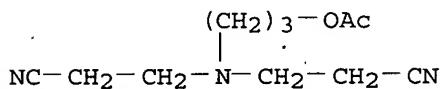
RN 449165-36-0 CAPLUS  
CN Propanenitrile, 3-[bis(2-methoxyethyl)amino]- (9CI) (CA INDEX NAME)



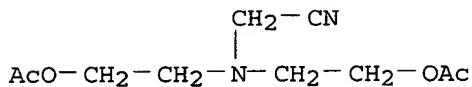
RN 449165-43-9 CAPLUS  
CN Propanenitrile, 3,3'-(2-methoxyethyl)imino]bis- (9CI) (CA INDEX NAME)



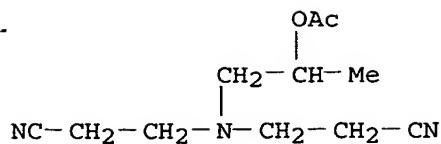
RN 449165-45-1 CAPLUS  
CN Propanenitrile, 3,3'-(3-(acetyloxy)propyl)imino]bis- (9CI) (CA INDEX NAME)



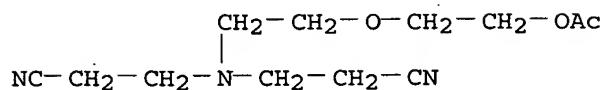
RN 449165-48-4 CAPLUS  
CN Acetonitrile, [bis(2-(acetyloxy)ethyl)amino]- (9CI) (CA INDEX NAME)



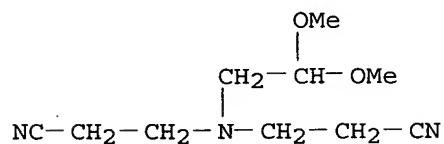
RN 449165-90-6 CAPLUS  
CN Propanenitrile, 3,3'-(2-(acetyloxy)propyl)imino]bis- (9CI) (CA INDEX NAME)



RN 449165-92-8 CAPLUS  
CN Propanenitrile, 3,3' - [(2 - (acetyloxy)ethoxyethyl)imino]bis- (9CI) (CA INDEX NAME)

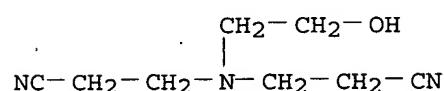


RN 449165-93-9 CAPLUS  
CN Propanenitrile, 3,3' - [(2,2-dimethoxyethyl)imino]bis- (9CI) (CA INDEX NAME)

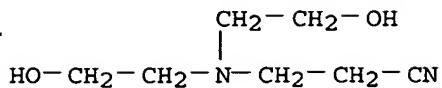


IT 6305-56-2P 17209-72-2P 34449-93-9P  
34449-97-3P 55110-98-0P 86241-19-2P  
449165-40-6P 449165-53-1P 449165-91-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); RACT (Reactant or reagent);  
USES (Uses)  
(amine compds. and photoresist compns. for patterning  
process)

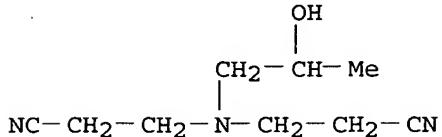
RN 6305-56-2 CAPLUS  
CN Propanenitrile, 3,3' - [(2-hydroxyethyl)imino]bis- (9CI) (CA INDEX NAME)



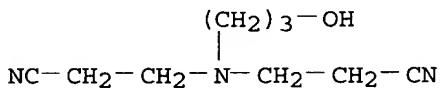
RN 17209-72-2 CAPLUS  
CN Propanenitrile, 3 - [bis(2-hydroxyethyl)amino] - (9CI) (CA INDEX NAME)



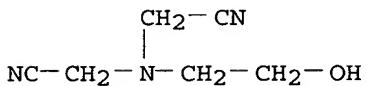
RN 34449-93-9 CAPLUS  
CN Propanenitrile, 3,3'-(2-hydroxypropyl)imino]bis- (9CI) (CA INDEX NAME)



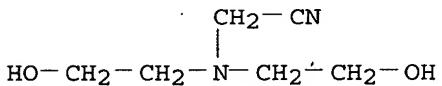
RN 34449-97-3 CAPLUS  
CN Propanenitrile, 3,3'-(3-hydroxypropyl)imino]bis- (9CI) (CA INDEX NAME)



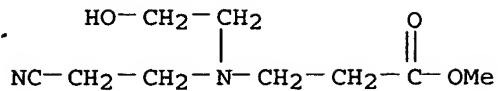
RN 55110-98-0 CAPLUS  
CN Acetonitrile, 2,2'-(2-hydroxyethyl)imino]bis- (9CI) (CA INDEX NAME)



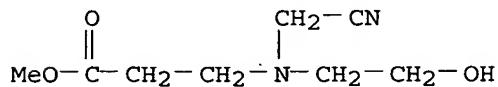
RN 86241-19-2 CAPLUS  
CN Acetonitrile, [bis(2-hydroxyethyl)amino]- (9CI) (CA INDEX NAME)



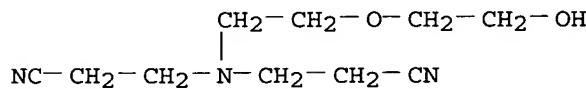
RN 449165-40-6 CAPLUS  
CN .beta.-Alanine, N-(2-cyanoethyl)-N-(2-hydroxyethyl)-, methyl ester (9CI)  
(CA INDEX NAME)



RN 449165-53-1 CAPLUS  
CN *.beta.-Alanine, N-(cyanomethyl)-N-(2-hydroxyethyl)-, methyl ester* (9CI)  
(CA INDEX NAME)

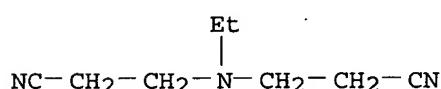


RN 449165-91-7 CAPLUS  
CN *Propanenitrile, 3,3'-[2-(2-hydroxyethoxy)ethyl]imino]bis-* (9CI) (CA INDEX NAME)

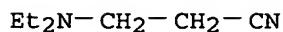


IT 1555-57-3P 5351-04-2P 7327-60-8P  
7528-78-1P 336608-77-6P 449165-35-9P  
449165-38-2P 449165-39-3P 449165-41-7P  
449165-42-8P 449165-44-0P 449165-46-2P  
449165-47-3P 449165-49-5P 449165-50-8P  
449165-51-9P 449165-52-0P 449165-54-2P  
449165-55-3P 449165-56-4P 449165-57-5P  
449165-58-6P 449165-59-7P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(amine compds. and photoresist compns. for patterning process)

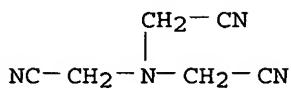
RN 1555-57-3 CAPLUS  
CN *Propanenitrile, 3,3'-(ethylimino)bis-* (9CI) (CA INDEX NAME)



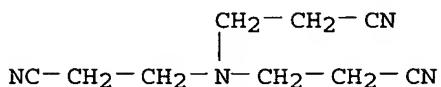
RN 5351-04-2 CAPLUS  
CN *Propanenitrile, 3-(diethylamino)-* (9CI) (CA INDEX NAME)



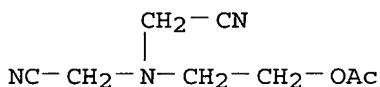
RN 7327-60-8 CAPLUS  
CN Acetonitrile, 2,2',2'''-nitrilotris- (9CI) (CA INDEX NAME)



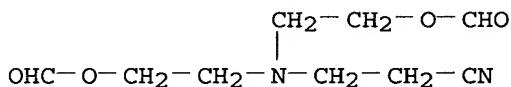
RN 7528-78-1 CAPLUS  
CN Propanenitrile, 3,3',3'''-nitrilotris- (9CI) (CA INDEX NAME)



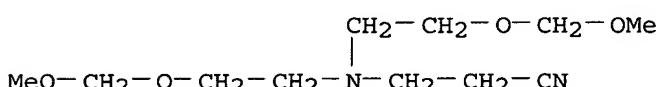
RN 336608-77-6 CAPLUS  
CN Acetonitrile, 2,2'-[[2-(acetyloxy)ethyl]imino]bis- (9CI) (CA INDEX NAME)



RN 449165-35-9 CAPLUS  
CN Propanenitrile, 3-[bis[2-(formyloxy)ethyl]amino]- (9CI) (CA INDEX NAME)

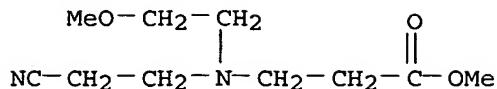


RN 449165-38-2 CAPLUS  
CN Propanenitrile, 3-[bis[2-(methoxymethoxy)ethyl]amino]- (9CI) (CA INDEX NAME)



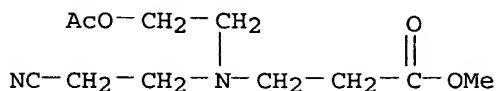
RN 449165-39-3 CAPLUS  
CN .beta.-Alanine, N-(2-cyanoethyl)-N-(2-methoxyethyl)-, methyl ester (9CI)

(CA INDEX NAME)



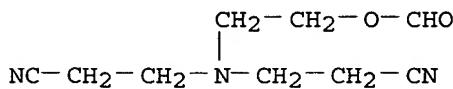
RN 449165-41-7 CAPLUS

CN .beta.-Alanine, N-[2-(acetyloxy)ethyl]-N-(2-cyanoethyl)-, methyl ester  
(9CI) (CA INDEX NAME)



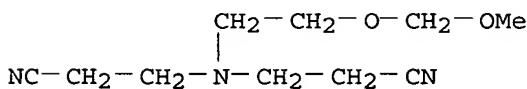
RN 449165-42-8 CAPLUS

CN Propanenitrile, 3,3'-[2-(formyloxy)ethyl]imino]bis- (9CI) (CA INDEX  
NAME)



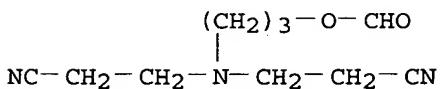
RN 449165-44-0 CAPLUS

CN Propanenitrile, 3,3'-[2-(methoxymethoxy)ethyl]imino]bis- (9CI) (CA INDEX  
NAME)



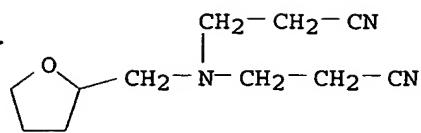
RN 449165-46-2 CAPLUS

CN Propanenitrile, 3,3'-[3-(formyloxy)propyl]imino]bis- (9CI) (CA INDEX  
NAME)

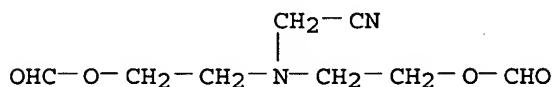


RN 449165-47-3 CAPLUS

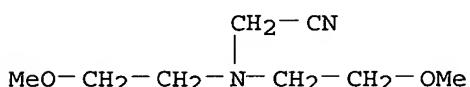
CN Propanenitrile, 3,3'-[[(tetrahydro-2-furanyl)methyl]imino]bis- (9CI) (CA  
INDEX NAME)



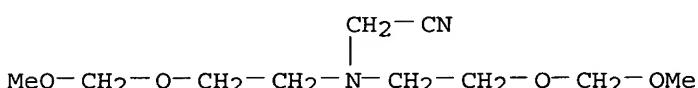
RN 449165-49-5 CAPLUS  
CN Acetonitrile, [bis[2-(formyloxy)ethyl]amino]- (9CI) (CA INDEX NAME)



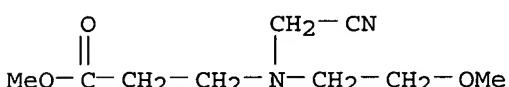
RN 449165-50-8 CAPLUS  
CN Acetonitrile, [bis(2-methoxyethyl)amino]- (9CI) (CA INDEX NAME)



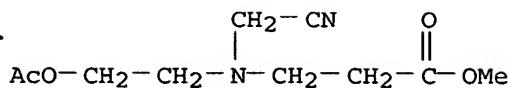
RN 449165-51-9 CAPLUS  
CN Acetonitrile, [bis[2-(methoxymethoxy)ethyl]amino]- (9CI) (CA INDEX NAME)



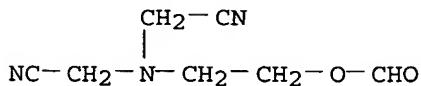
RN 449165-52-0 CAPLUS  
CN .beta.-Alanine, N-(cyanomethyl)-N-(2-methoxyethyl)-, methyl ester (9CI) (CA INDEX NAME)



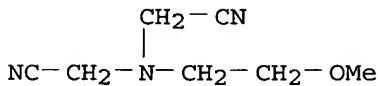
RN 449165-54-2 CAPLUS  
CN .beta.-Alanine, N-[2-(acetoxyethyl)-]N-(cyanomethyl)-, methyl ester (9CI) (CA INDEX NAME)



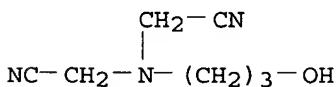
RN 449165-55-3 CAPLUS  
CN Acetonitrile, 2,2'--[2-(formyloxy)ethyl]imino]bis- (9CI) (CA INDEX NAME)



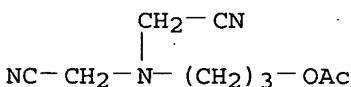
RN 449165-56-4 CAPLUS  
CN Acetonitrile, 2,2'-[(2-methoxyethyl)imino]bis- (9CI) (CA INDEX NAME)



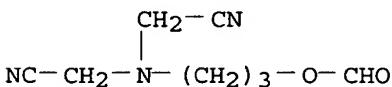
RN 449165-57-5 CAPLUS  
CN Acetonitrile, 2,2'-[(3-hydroxypropyl)imino]bis- (9CI) (CA INDEX NAME)



RN 449165-58-6 CAPLUS  
CN Acetonitrile, 2,2'-[[3-(acetyloxy)propyl]imino]bis- (9CI) (CA INDEX NAME)



RN 449165-59-7 CAPLUS  
CN Acetonitrile, 2,2'-[[3-(formyloxy)propyl]imino]bis- (9CI) (CA INDEX NAME)



IC ICM G03F007-038

KOROMA EIC1700

ICS G03F007-039; G03F007-38  
NCL 430270100  
.CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s) : 38  
ST photoresist amine cyano compd  
IT Photoresists  
    (amine compds. and photoresist compns. for patterning process)  
IT 3010-02-4P 3088-41-3P, 1-Piperidinepropanenitrile 4542-47-6P,  
4-Morpholinepropanenitrile 5807-02-3P, 4-Morpholineacetonitrile  
5807-11-4P, 4-Morpholinebutanenitrile 86071-97-8P  
449165-34-8P 449165-36-0P 449165-43-9P  
449165-45-1P 449165-48-4P 449165-74-6P 449165-79-1P  
449165-90-6P 449165-92-8P 449165-93-9P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
    (amine compds. and photoresist compns. for patterning  
process)  
IT 6305-56-2P 17209-72-2P 34449-93-9P  
34449-97-3P 55110-98-0P 86241-19-2P  
449165-40-6P 449165-53-1P 449165-61-1P 449165-71-3P  
449165-91-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); RACT (Reactant or reagent);  
USES (Uses)  
    (amine compds. and photoresist compns. for patterning  
process)  
IT 1555-57-3P 3010-03-5P, 1-Piperidineacetonitrile  
5351-04-2P 7327-60-8P 7528-78-1P  
26165-45-7P, 1-Pyrrolidinepropanenitrile 29134-29-0P,  
1-Pyrrolidineacetonitrile 336608-77-6P 449165-35-9P  
449165-38-2P 449165-39-3P 449165-41-7P  
449165-42-8P 449165-44-0P 449165-46-2P  
449165-47-3P 449165-49-5P 449165-50-8P  
449165-51-9P 449165-52-0P 449165-54-2P  
449165-55-3P 449165-56-4P 449165-57-5P  
449165-58-6P 449165-59-7P 449165-60-0P 449165-62-2P  
449165-63-3P 449165-66-6P 449165-67-7P 449165-70-2P 449165-77-9P  
449165-81-5P 449165-83-7P 449165-85-9P 449165-86-0P 449165-87-1P  
449165-88-2P 449165-89-3P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
    (amine compds. and photoresist compns. for patterning  
process)  
IT 3089-11-0  
RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)  
    (crosslinker; amine compds. and photoresist compns. for patterning  
process)  
IT 117458-06-7 138529-81-4 144317-44-2 266308-64-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (photoacid generator; amine compds. and photoresist compns. for

patterning process)  
 IT 64-18-6, Formic acid, reactions 75-04-7, Ethylamine, reactions  
 96-33-3, Methyl acrylate 106-71-8 107-13-1, Acrylonitrile, reactions  
 109-85-3, 2-Methoxyethylamine 109-89-7, Diethylamine, reactions  
 110-89-4, Piperidine, reactions 110-91-8, Morpholine, reactions  
 111-42-2, Diethanolamine, reactions 111-95-5 121-44-8, Triethylamine,  
 reactions 123-75-1, Pyrrolidine, reactions 141-43-5, 2-Aminoethanol,  
 reactions 156-87-6, 3-Hydroxy-1-propylamine 590-17-0,  
 Bromoacetonitrile 929-06-6 4795-29-3, Tetrahydrofurfurylamine  
 5332-06-9, 4-Bromobutylonitrile 13818-40-1, Cyanomethyl acrylate  
 22483-09-6, 2,2-Dimethoxyethylamine 74264-63-4 449165-37-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of amine compds. and photoresist compns. for patterning  
 process)  
 IT 24979-74-6 129674-22-2 158593-28-3 221900-55-6 279243-86-6  
 326925-68-2 336620-26-9 443796-30-3 449165-94-0 449165-96-2  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
 engineered material use); USES (Uses)  
 (resin; amine compds. and photoresist compns. for patterning process)

L19 ANSWER 9 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2002:72215 CAPLUS  
 DOCUMENT NUMBER: 136:115067  
 TITLE: Self-assembled monolayer surfaces that resist the  
 adsorption of biological species  
 INVENTOR(S): Chapman, Robert G.; Ostuni, Emanuele; Liang, Michael  
 N.; Yan, Lin; Whitesides, George M.  
 PATENT ASSIGNEE(S): President and Fellows of Harvard College, USA  
 SOURCE: PCT Int. Appl., 91 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002006407	A2	20020124	WO 2001-US22455	20010717
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002102405	A1	20020801	US 2001-907551	20010717
EP 1301571	A2	20030416	EP 2001-953515	20010717
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRIORITY APPLN. INFO.:			US 2000-218739P	P 20000717

WO 2001-US22455 W 20010717

AB The present invention provides articles resistant to the adsorption of proteins, cells and bacteria. The articles can either have a chem. chain bonded thereon where the chem. chain can comprise a terminal group free of a hydrogen bond donor or where a hydrogen bond donor is sufficiently buried such that an exposed surface of the article including the chem. chain is free of a hydrogen bond donor. The chem. chain, or plurality of chem. chains, can comprise a monolayer such as a self-assembled monolayer (SAM) which can be homogeneous (one type of SAM) or mixed, i.e. or more different types of SAMs. Other more specific examples of chem. chains are provided. The plurality of chem. chains can comprise a polymer such as a polyamine. In many aspects, the plurality of chem. chains is sufficiently free of crosslinking or branching. The present invention also provides an article capable of specific binding of a desired biomol. while preventing non-specific binding of biomols.

IT 111-94-4P 628-87-5P 868-54-2P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(surfaces that **resist** adsorption of biol. species)

RN 111-94-4 CAPLUS

CN Propanenitrile, 3,3'-iminobis- (9CI) (CA INDEX NAME)

NC—CH<sub>2</sub>—CH<sub>2</sub>—NH—CH<sub>2</sub>—CH<sub>2</sub>—CN

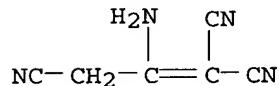
RN 628-87-5 CAPLUS

CN Acetonitrile, 2,2'-iminobis- (9CI) (CA INDEX NAME)

NC—CH<sub>2</sub>—NH—CH<sub>2</sub>—CN

RN 868-54-2 CAPLUS

CN 1-Propene-1,1,3-tricarbonitrile, 2-amino- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C09D005-14

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 6, 10, 35

ST self assembled monolayer polymer immobilization protein biomol resist adsorption

IT Amides, properties

Amines, properties

Esters, properties

Ethers, properties

Imines

RL: PRP (Properties)  
(as linking agents; surfaces that resist adsorption of biol. species)

IT Animal cell line  
(bovine endothelial (BCE); surfaces that resist adsorption of biol. species)

IT Adsorption  
(protein; surfaces that resist adsorption of biol. species)

IT Biochemical molecules

Ceramics

Crosslinking

Escherichia coli

Hydrogen bond

Hydrophilicity

Immobilization, molecular

Molecular weight

Self-assembled monolayers

Simulation and Modeling, physicochemical

Staphylococcus aureus

Staphylococcus epidermidis  
(surfaces that resist adsorption of biol. species)

IT Ligands  
RL: ANT (Analyte); ANST (Analytical study)  
(surfaces that resist adsorption of biol. species)

IT Metals, uses  
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
(surfaces that resist adsorption of biol. species)

IT Polymers, uses  
RL: ARG (Analytical reagent use); DEV (Device component use); PRP  
(Properties); ANST (Analytical study); USES (Uses)  
(surfaces that resist adsorption of biol. species)

IT Fibrinogens

Proteins  
RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
PROC (Process)  
(surfaces that resist adsorption of biol. species)

IT 57-13-6, Urea, properties 3812-32-6, Carbonate, properties  
RL: PRP (Properties)  
(as linking agents; surfaces that resist adsorption of biol. species)

IT 7631-86-9, Silica, uses  
RL: ARG (Analytical reagent use); DEV (Device component use); PRP  
(Properties); ANST (Analytical study); USES (Uses)  
(surfaces that resist adsorption of biol. species)

IT 7440-57-5, Gold, reactions  
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study);  
RACT (Reactant or reagent); USES (Uses)  
(surfaces that resist adsorption of biol. species)

IT 75-36-5DP, Acetyl chloride, reaction products with polymeric  
self-assembled monolayers 109-01-3P 110-70-3P 111-94-4P  
112-16-3DP, Dodecanoyl chloride, reaction products with polyethylenimine  
self-assembled monolayers 122-07-6P 124-40-3P, preparation 138-41-0P  
142-25-6P 375-60-0DP, reaction products with polyethylenimine  
self-assembled monolayers 598-41-4P 628-87-5P

868-54-2P 1001-53-2P 1857-19-8P 1857-20-1P 3416-24-8P  
5094-33-7P 6338-55-2P 7755-92-2P, 1-Piperazinecarboxaldehyde  
9002-98-6DP, conjugates with SAMs 9004-54-0DP, Dextran, benzoic acid  
sulfonamide derivs. 9056-51-3DP, reaction products with polyethylenimine  
self-assembled monolayers 13349-82-1P 13889-98-0P 16024-55-8DP,  
reaction products with polyethylenimine self-assembled monolayers  
20818-25-1P 21062-20-4DP, reaction products with polyethylenimine  
self-assembled monolayers 23645-04-7P 25104-18-1DP, conjugates with  
SAMs 26913-06-4DP, Linear Polyethylenimine, conjugates with SAMs  
27725-41-3P 30551-89-4DP, Poly allylamine, conjugates with SAMs  
31245-56-4DP, conjugates with SAMs 33941-15-0P 38000-06-5DP,  
Poly(L-lysine), conjugates with SAMs 38870-89-2DP, reaction products  
with polyethylenimine self-assembled monolayers 63881-16-3DP, reaction  
products with polyethylenimine self-assembled monolayers 63881-16-3DP,  
reaction products with polymeric self-assembled monolayers 72236-26-1DP,  
reaction products with polyethylenimine self-assembled monolayers  
73159-13-4DP, reaction products with polyethylenimine self-assembled  
monolayers 74448-00-3P 83441-72-9P 83585-61-9P 116747-79-6P  
130727-41-2P 154715-61-4DP, reaction products with polyethylenimine  
self-assembled monolayers 171421-18-4DP, gold-bound 297162-57-3P  
303067-66-5P 303067-67-6P 303067-68-7P 303067-69-8P 364613-61-6P  
364613-86-5P 364613-88-7P 364613-90-1P 364613-99-0P 391684-27-8P  
391684-28-9P 391684-29-0P 391684-30-3P 391684-31-4P 391684-32-5P  
391684-33-6DP, gold-bound 391684-34-7DP, reaction products with  
polyethylenimine self-assembled monolayers  
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic  
preparation); PREP (Preparation); USES (Uses)  
(surfaces that resist adsorption of biol. species)

IT 9001-03-0, Carbonic anhydrase 9001-63-2, Lysozyme  
RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
PROC (Process)  
(surfaces that resist adsorption of biol. species)

IT 56-40-6D, Glycine, derivs.  
RL: PRP (Properties)  
(surfaces that resist adsorption of biol. species)

IT 79-37-8, Oxalyl chloride 488-43-7, 1-Amino-1-deoxy-D-sorbitol  
1643-19-2, Tetrabutyl ammonium bromide 5292-43-3 16024-58-1  
24424-99-5, Di-tert-butyl dicarbonate 39160-70-8 51857-17-1  
154715-61-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(surfaces that resist adsorption of biol. species)

IT 112-35-6P, Triethylene glycol monomethyl ether 16024-60-5P,  
2,5,8,11-Tetraoxatridecan-13-oic acid 63881-16-3P 67665-18-3P  
73159-13-4P 127177-02-0P 179112-76-6P 297162-47-1P 297162-48-2P  
297162-49-3P 297162-50-6P 297162-55-1P 331992-12-2P, 391684-35-8P  
391684-36-9P 391684-37-0P 391684-38-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(surfaces that resist adsorption of biol. species)

DOCUMENT NUMBER: 135:293929  
TITLE: A Survey of Structure-Property Relationships of Surfaces that Resist the Adsorption of Protein  
AUTHOR(S): Ostuni, Emanuele; Chapman, Robert G.; Holmlin, R. Erik; Takayama, Shuichi; Whitesides, George M.  
CORPORATE SOURCE: Department of Chemistry and Chemical Biology, Harvard University, Cambridge, MA, 02138, USA  
SOURCE: Langmuir (2001), 17(18), 5605-5620  
CODEN: LANGD5; ISSN: 0743-7463  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

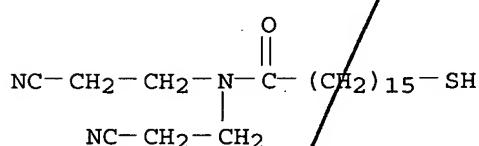
AB This paper describes the use of surface plasmon resonance (SPR) spectroscopy and self-assembled monolayers (SAMs) to det. the characteristics of functional groups that give surfaces the ability to resist the nonspecific adsorption of proteins from soln. Mixed SAMs presenting different functional groups were prep'd. for screening using a synthetic protocol based on the reaction of org. amines with a SAM terminated by interchain carboxylic anhydride groups. Surfaces that presented derivs. of oligo(sarcosine), N-acetylpiperazine, and permethylated sorbitol groups were particularly effective in resisting the adsorption of proteins. Incorporation of these groups into single-component SAMs resulted in surfaces that are comparable to (but slightly less good than) single-component SAMs that present oligo(ethylene glycol) in their ability to resist the adsorption of proteins. In the group of surfaces examd., those that resisted the adsorption of proteins had the following properties: they were hydrophilic; they contained groups that were hydrogen-bond acceptors but not hydrogen-bond donors; and they were overall elec. neutral.

IT 364613-73-0 364613-74-1

RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (structure-property relationships of surfaces that resist protein adsorption)

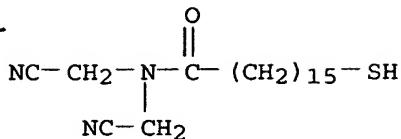
RN 364613-73-0 CAPLUS

CN Hexadecanamide, N,N-bis(2-cyanoethyl)-16-mercpto- (9CI) (CA INDEX NAME)



RN 364613-74-1 CAPLUS

CN Hexadecanamide, N,N-bis(cyanomethyl)-16-mercpto- (9CI) (CA INDEX NAME)



CC 63-8 (Pharmaceuticals)  
Section cross-reference(s): 9, 23  
ST surface structure protein adsorption resistance; self assembled monolayer  
structure protein adsorption; plasmon resonance spectroscopy monolayer  
protein adsorption  
IT Hydrogen bond  
(acceptors; structure-property relationships of surfaces that resist  
protein adsorption)  
IT Molecular structure-property relationship  
(protein adsorption-resisting; structure-property relationships of  
surfaces that resist protein adsorption)  
IT Adsorption  
(protein; structure-property relationships of surfaces that resist  
protein adsorption)  
IT Functional groups  
Hydrophilicity  
Interface  
Self-assembled monolayers  
Surface  
(structure-property relationships of surfaces that resist protein  
adsorption)  
IT Fibrinogens  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(structure-property relationships of surfaces that resist protein  
adsorption)  
IT Spectroscopy  
(surface plasmon resonance; structure-property relationships of  
surfaces that resist protein adsorption)  
IT 9001-63-2, Lysozyme  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(L 6876; structure-property relationships of surfaces that resist  
protein adsorption)  
IT 364613-86-5P 364613-90-1P 364613-99-0P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN  
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);  
PREP (Preparation); PROC (Process); USES (Uses)  
(structure-property relationships of surfaces that resist protein  
adsorption)  
IT 6338-55-2 130727-41-2 200430-90-6 226381-45-9 303067-70-1  
303067-71-2 303067-72-3 303067-73-4 303067-74-5 303067-75-6  
303067-76-7 303067-77-8 303067-78-9 303067-79-0 303067-80-3  
350251-47-7 364613-46-7 364613-47-8 364613-48-9 364613-49-0  
364613-50-3 364613-51-4 364613-52-5 364613-53-6 364613-54-7  
364613-55-8 364613-56-9 364613-57-0 364613-58-1 364613-59-2

364613-60-5 364613-61-6 364613-62-7 364613-63-8 364613-64-9  
364613-65-0 364613-66-1 364613-67-2 364613-68-3 364613-69-4  
364613-70-7 364613-71-8 364613-72-9 364613-73-0  
364613-74-1 364613-75-2 364613-76-3 364613-77-4  
364613-78-5 364613-79-6 364613-80-9 364613-81-0  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(structure-property relationships of surfaces that resist protein adsorption)  
IT 364613-94-5P  
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(structure-property relationships of surfaces that resist protein adsorption)  
IT 110-70-3, N,N'-Dimethyl-1,2-diaminoethane 124-22-1, Dodecylamine  
142-25-6, N,N,N',N'-Trimethyl-1,2-diaminoethane 488-43-7,  
1-Amino-1-deoxy-D-sorbitol 598-41-4 1605-65-8,  
Tetramethylphosphorodiamidic chloride 1857-19-8 1857-20-1 5616-81-9  
6974-31-8 7087-68-5, Diisopropylethylamine 13360-57-1 13889-98-0  
24424-99-5, Di-tert-butyl dicarbonate 53733-96-3 68641-49-6,  
Bis(2-oxo-3-oxazolidinyl)phosphinic chloride 69839-68-5,  
16-Mercaptohexadecanoic acid 112257-19-9 136088-69-2 139270-96-5  
303067-68-7 303067-69-8 364613-84-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(structure-property relationships of surfaces that resist protein adsorption)  
IT 62245-96-9P 364613-82-1P 364613-83-2P 364613-85-4P 364613-87-6P  
364613-88-7P 364613-89-8P 364613-91-2P 364613-92-3P 364613-93-4P  
364613-95-6P 364613-96-7P 364613-97-8P 364613-98-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(structure-property relationships of surfaces that resist protein adsorption)  
IT 7440-57-5, Gold, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(substrate; structure-property relationships of surfaces that resist protein adsorption)  
REFERENCE COUNT: 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 11 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2000:238401 CAPLUS  
DOCUMENT NUMBER: 132:271666  
TITLE: Antireflective coatings comprising polymeric polyoxyalkylenated colorants for use with photoresists  
INVENTOR(S): Bruhnke, John D.; Lever, John G.  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S., 8 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6048662	A	20000411	US 1998-211355	19981215

PRIORITY APPLN. INFO.: US 1998-211355 19981215

AB This invention relates to antireflective coatings comprising polymeric polyoxyalkylenated colorants. More particularly, the present invention relates to antireflective coatings for utilization in forming thin layers between reflective substrates and photoresists. Such antireflective coatings are very useful and beneficial in the prodn. and fabrication of semiconductor devices by photolithog. procedures. The coatings may also be applied on lenses, mirrors, and other optical components. Methods of forming such antireflective coatings are also disclosed.

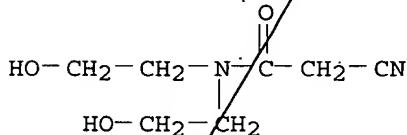
IT 231951-98-7P 263544-59-8P 263544-60-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction in prep. polymeric polyoxyalkylenated colorants for antireflective coatings for photoresists)

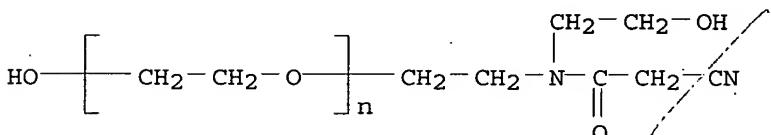
RN 231951-98-7 CAPLUS

CN Acetamide, 2-cyano-N,N-bis(2-hydroxyethyl)- (9CI) (CA INDEX NAME)



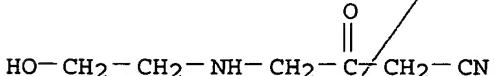
RN 263544-59-8 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[2-[(cyanoacetyl)(2-hydroxyethyl)amino]ethyl]-.omega.-hydroxy- (9CI). (CA INDEX NAME)



RN 263544-60-1 CAPLUS

CN Butanenitrile, 4-[(2-hydroxyethyl)amino]-3-oxo- (9CI) (CA INDEX NAME)

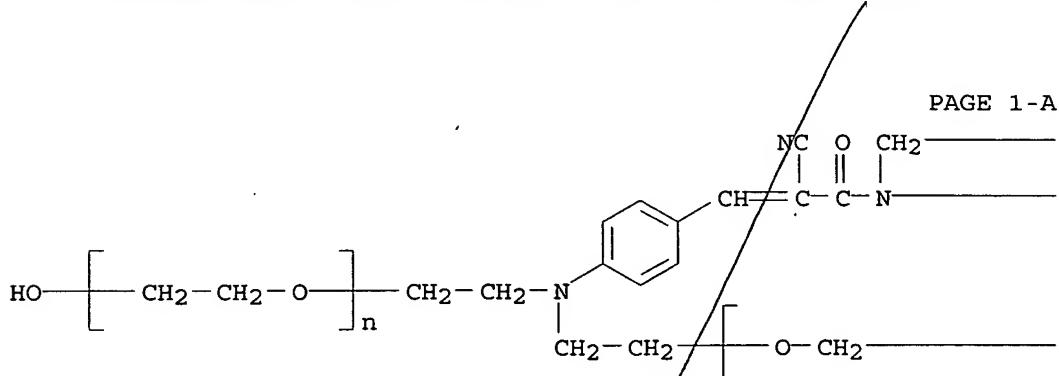


IT 263544-62-3P 263544-63-4P

- RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
- (prepn. and use in prep. bottom antireflective coatings for photoresists)

RN 263544-62-3 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[[[4-[3-[bis(2-hydroxyethyl)amino]-2-cyano-3-oxo-1-propenyl]phenyl]imino]di-2,1-ethanediyl]bis[.omega.-hydroxy- (9CI) (CA INDEX NAME)



PAGE 1-B

— CH<sub>2</sub>— OH

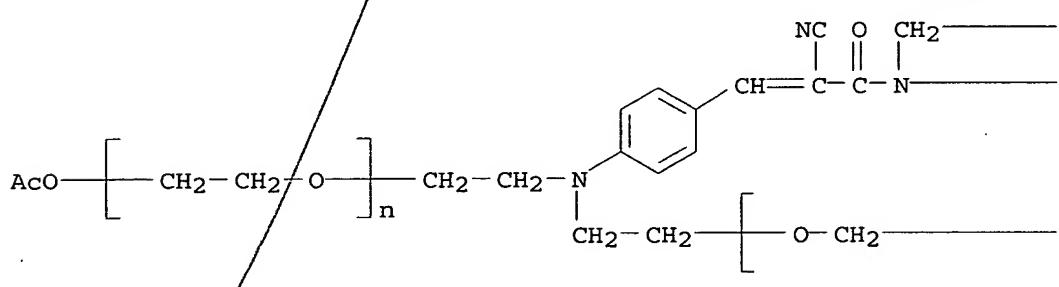
— CH<sub>2</sub>— CH<sub>2</sub>— OH

— CH<sub>2</sub>— [ ]<sub>n</sub> OH

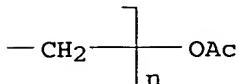
RN 263544-63-4 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[[[4-[3-[bis(2-hydroxyethyl)amino]-2-cyano-3-oxo-1-propenyl]phenyl]imino]di-2,1-ethanediyl]bis[.omega.-(acetoxy)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

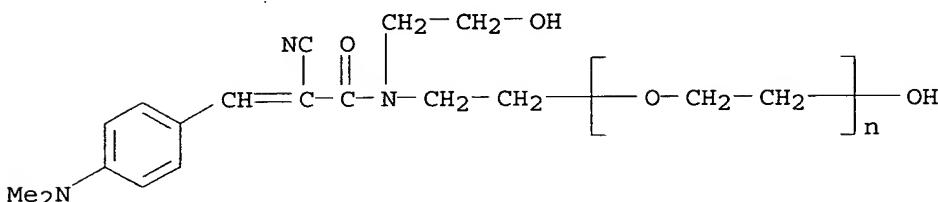
— CH<sub>2</sub> — OH— CH<sub>2</sub> — CH<sub>2</sub> — OH

IT 263544-61-2P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (reaction in prep. polymeric polyoxyalkylenated colorants for antireflective coatings for photoresists)

RN 263544-61-2 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[2-[[2-cyano-3-[4-(dimethylamino)phenyl]-1-oxo-2-propenyl] (2-hydroxyethyl)amino]ethyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)



IC ICM G03C005-00

ICS G03C001-815

NCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 73

ST antireflective bottom coating photoresist polymeric polyoxyalkylenated colorant

IT Lenses

Mirrors

Optical instruments

(antireflective coatings contg. polymeric polyoxyalkylenated colorants for)

IT Photoresists

(bottom antireflective coatings contg. polymeric polyoxyalkylenated colorants for)

IT Antireflective films

(bottom; contg. polymeric polyoxyalkylenated colorants for)

photoresists)  
IT 15029-32-0P 231951-98-7P 263544-59-8P  
263544-60-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and reaction in prep. polymeric polyoxyalkylenated colorants for antireflective coatings for photoresists)  
IT 137446-38-9P 263544-62-3P 263544-63-4P 263544-64-5P  
263544-65-6P 263544-66-7P 263544-67-8P 263544-68-9P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(prepn. and use in prep. bottom antireflective coatings for photoresists)  
IT 100-10-7, p-Dimethylaminobenzaldehyde 104-94-9, p-Anisidine 105-56-6, Ethyl cyanoacetate 107-91-5, 2-Cyanoacetamide 110-91-8, Morpholine, reactions 111-42-2, Diethanolamine, reactions 141-43-5, Monoethanolamine, reactions 52137-05-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction in prep. polymeric polyoxyalkylenated colorants for antireflective coatings for photoresists)  
IT 263544-61-2P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(reaction in prep. polymeric polyoxyalkylenated colorants for antireflective coatings for photoresists)

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 12 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1999:227690 CAPLUS  
DOCUMENT NUMBER: 131:20170  
TITLE: Effect of azo dyes on polyester fabrics for alkaline discharge-resist printing  
AUTHOR(S): Yen, M. S.; Huang, K. S.; Wang, I. J.  
CORPORATE SOURCE: Department of Fiber Engineering, Kung Shan Institute of Technology, Tainan, Taiwan  
SOURCE: American Dyestuff Reporter (1999), 88(2), 13-19  
CODEN: ADREAI; ISSN: 0002-8266  
PUBLISHER: SAF International Publications, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

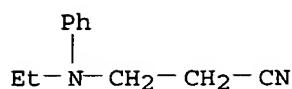
AB The synthesis of a series of disperse dyes obtained by diazotization of di- and tri- substituent aniline and coupling with N,N-dialkylanilines is described. The purified dyes were characterized by FTIR, <sup>1</sup>H-NMR and UV spectra. In addn., the feasibility of alk. discharge-resist printing for polyester fabrics with the dyes is discussed. Colorability in the discharge-resist printing fabrics is better in acidic than in alk. conditions and the evenness is worse in alk. soln., but sharpness is generally good. The abrasion fastness of treated fabrics is 3-4 and washing fastness is 4-5, but alk. condition merely reveals a 3-4 grade.

IT 148-87-8, N-(2-Cyanoethyl)-N-ethylaniline  
RL: RCT (Reactant); RACT (Reactant or reagent)

(starting material; synthesis of azo dyes for alk. discharge-resist printing on polyester fabrics)

RN 148-87-8 CAPLUS

CN Propanenitrile, 3-(ethylphenylamino)- (9CI) (CA INDEX NAME)



IT 13301-61-6P 16586-43-9P 40880-51-1P

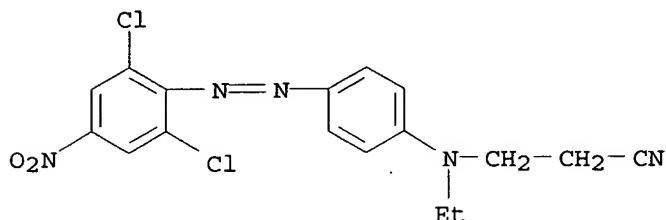
52301-73-2P 72928-16-6P 226563-40-2P

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(synthesis of azo dyes for alk. discharge-resist printing on polyester fabrics)

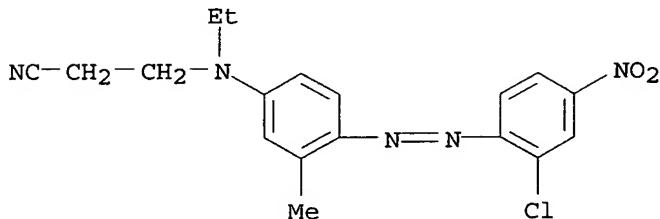
RN 13301-61-6 CAPLUS

CN Propanenitrile, 3-[(4-[(2,6-dichloro-4-nitrophenyl)azo]phenyl]ethylamino]- (9CI) (CA INDEX NAME)



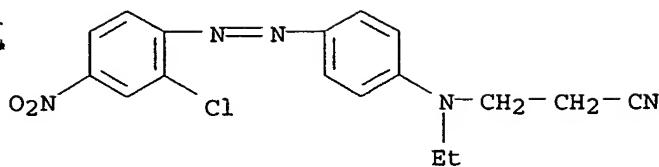
RN 16586-43-9 CAPLUS

CN Propanenitrile, 3-[(4-[(2-chloro-4-nitrophenyl)azo]-3-methylphenyl]ethylamino)- (9CI) (CA INDEX NAME)



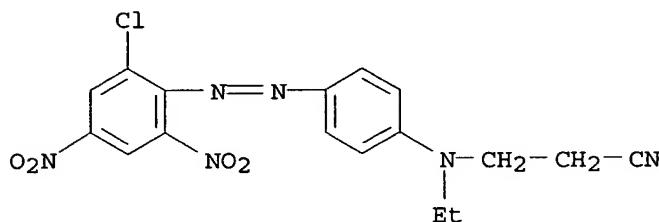
RN 40880-51-1 CAPLUS

CN Propanenitrile, 3-[(4-[(2-chloro-4-nitrophenyl)azo]phenyl]ethylamino)- (9CI) (CA INDEX NAME)



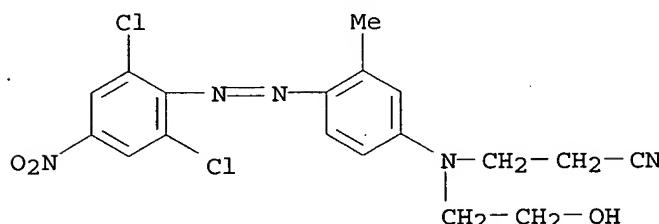
RN 52301-73-2 CAPLUS

CN Propanenitrile, 3-[(4-[(2-chloro-4,6-dinitrophenyl)azo]phenyl)ethylamino] - (9CI) (CA INDEX NAME)



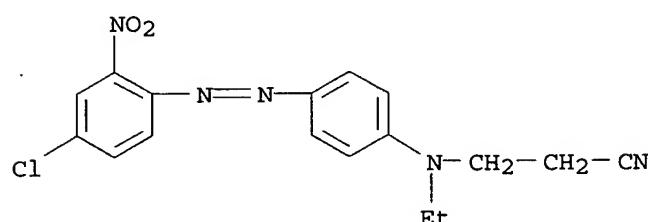
RN 72928-16-6 CAPLUS

CN Propanenitrile, 3-[(4-[(2,6-dichloro-4-nitrophenyl)azo]phenyl)-3-methylphenyl] (2-hydroxyethyl)amino] - (9CI) (CA INDEX NAME)



RN 226563-40-2 CAPLUS

CN Propanenitrile, 3-[(4-[(4-chloro-2-nitrophenyl)azo]phenyl)ethylamino] - (9CI) (CA INDEX NAME)



CC 40-6 (Textiles and Fibers)

Section cross-reference(s) : 41

ST azo dye polyester fabric alk discharge resist printing  
IT Textile printing  
(alk. discharge-resist; synthesis of azo dyes for alk. discharge-resist  
printing on polyester fabrics)  
IT Azo dyes  
(synthesis of azo dyes for alk. discharge-resist printing on polyester  
fabrics)  
IT Polyester fibers, processes  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(synthesis of azo dyes for alk. discharge-resist printing on polyester  
fabrics)  
IT 121-87-9, 4-Nitro-2-chloroaniline 148-87-8, N-(2-Cyanoethyl)-N-  
ethylaniline  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(starting material; synthesis of azo dyes for alk. discharge-  
resist printing on polyester fabrics)  
IT 13301-61-6P 16586-43-9P 40880-51-1P  
52301-73-2P 72928-16-6P 226563-33-3P 226563-35-5P  
226563-38-8P 226563-40-2P 226563-41-3P  
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic  
preparation); PREP (Preparation); PROC (Process)  
(synthesis of azo dyes for alk. discharge-resist printing on  
polyester fabrics)

L19 ANSWER 13 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:42555 CAPLUS  
DOCUMENT NUMBER: 130:102895  
TITLE: Photopolymerizable composition as dry-film photoresist  
INVENTOR(S): Morihiko, Yamada; Tsuyoshi, Katoh; Katsumi, Murofushi  
PATENT ASSIGNEE(S): Showa Denko Kabushiki Kaisha, Japan  
SOURCE: Eur. Pat. Appl., 14 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 889362	A1	19990107	EP 1998-111662	19980624
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11072915	A2	19990316	JP 1998-170073	19980617
US 6033829	A	20000307	US 1998-105147	19980626
PRIORITY APPLN. INFO.:			JP 1997-174171	A 19970630
			US 1998-74613P	P 19980213

OTHER SOURCE(S): MARPAT 130:102895

AB A UV- and/or visible light-sensitive photopolymerizable compn., which may  
be used as a dry-film photoresist, comprises (a) a thermoplastic polymer  
obtained by copolymer. of at least one monomer selected from  
.alpha.,.beta.-unsatd. carboxyl group-contg. monomers with another  
monomer, (b) a crosslinking monomer with at least two ethylenic unsatd.

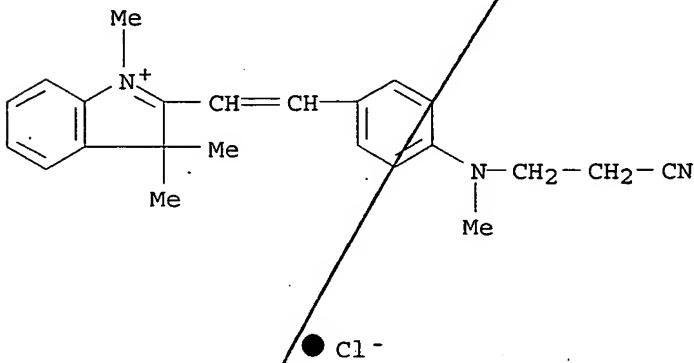
groups per mol., and (c) a UV and/or visible light polymn. initiator comprising a quaternary boron salt and a sensitizing dye.

IT 12217-48-0, Basic Red 14

RL: TEM (Technical or engineered material use); USES (Uses) (photopolymerizable dry-film photoresists contg. crosslinking monomers, thermoplastic polymers, quaternary boron salts and)

RN 12217-48-0 CAPLUS

CN 3H-Indolium, 2-[2-[4-[(2-cyanoethyl)methylamino]phenyl]ethenyl]-1,3,3-trimethyl-, chloride (9CI) (CA INDEX NAME)



IC ICM G03F007-029

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photopolymerizable dry film photoresist thermoplastic polymer; quaternary boron salt photopolymerizable dry photoresist

IT Photoresists

(dry-film; photopolymerizable compns. contg. thermoplastic polymers prep'd. from unsatd. carboxyl group-contg. monomers and crosslinking monomers as)

IT 60472-57-3, Methacrylic acid-methyl acrylate-methyl methacrylate-styrene copolymer 136868-46-7, Methacrylic acid-methyl acrylate-2-ethylhexyl methacrylate-styrene copolymer 219125-18-5, Maleic acid-methyl acrylate-methyl methacrylate-styrene copolymer

RL: TEM (Technical or engineered material use); USES (Uses) (photopolymerizable dry-film photoresists contg. crosslinking monomers, quaternary boron salts and)

IT 118996-06-8 120307-06-4, Tetrabutylammonium butyltriphenylborate

162215-82-9, Tetrabutylammonium butyltritolylborate 211675-36-4,

Tetrabutylammonium butyltri(4-methyl-1-naphthyl)borate 219125-19-6

219125-21-0 219125-22-1

RL: TEM (Technical or engineered material use); USES (Uses)

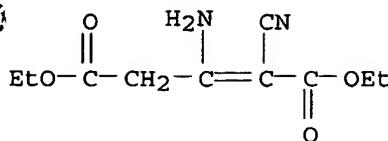
(photopolymerizable dry-film photoresists contg. crosslinking monomers, thermoplastic polymers and)

IT 989-38-8 4657-00-5, Basic Orange 22 12217-48-0, Basic Red 14

12221-83-9, Basic Yellow 36

RL: TEM (Technical or engineered material use); USES (Uses)

(photopolymerizable dry-film photoresists contg. crosslinking



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST polymer photoresist crosslinking photobase generator; acetoxyethyl methacrylate polymer photoresist photobase generator; cyanoacetoxyethyl methacrylate polymer photoresist photobase generator

IT Knoevenagel reaction  
Photoresists  
(lithog. imaging with copolymer photoresist contg. enolizable pendant groups and photogenerated amine catalysts)

IT Crosslinking  
(photochem.; lithog. imaging with copolymer photoresist contg. enolizable pendant groups and photogenerated amine catalysts)

IT 197315-98-3P, 4-(2-Cyanoacetoxyethyl)styrene-4-[(trimethylsilyl)oxy]styrene copolymer  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(acid deprotection reaction in prepn. of lithog. polymeric photoresist material)

IT 71128-83-1, 2-Methoxy-5-methylisophthaldehyde  
RL: MOA (Modifier or additive use); USES (Uses)  
crosslinking additive; lithog. imaging with copolymer photoresist and photogenerated amine catalysts)

IT 27901-88-8P, 2-Acetoacetoxyethyl methacrylate-methyl methacrylate copolymer 179748-29-9P, 2-Cyanoacetoxyethyl methacrylate-methyl methacrylate copolymer  
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(lithog. imaging with acetoacetoxyethyl methacrylate-Me methacrylate copolymer photoresist and photogenerated amine catalysts)

IT 28447-79-2 197315-99-4  
RL: MSC (Miscellaneous)  
(lithog. imaging with copolymer photoresist and photogenerated amine catalysts)

IT 197315-97-2P  
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(lithog. imaging with copolymer photoresist and photogenerated amine catalysts)

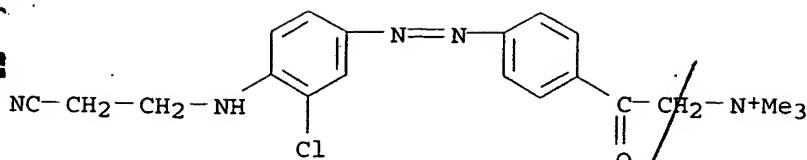
IT 133795-09-2, [(2,6-Dinitrobenzyl)oxy]carbonylcyclohexylamine  
RL: CAT (Catalyst use); USES (Uses)  
(photobase generator; lithog. imaging with copolymer photoresist and photogenerated amine catalysts)

IT 58555-66-1, 4-[(Trimethylsilyl)oxy]styrene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. in prepn. of lithog. polymeric photoresist material)  
IT 21115-26-4P, 2-Cyanoacetoxyethyl methacrylate 197315-96-1P,  
4-(2-Cyanoacetoxyethyl)styrene  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(polymn. in prepn. of lithog. polymeric photoresist material)

L19 ANSWER 15 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:675585 CAPLUS  
DOCUMENT NUMBER: 125:312455  
TITLE: Colored photosensitive resin composition, colored  
image-forming material, color filter and its  
manufacture  
INVENTOR(S): Tai, Seiji; Katayose, Mitsuo; Wada, Yumiko  
PATENT ASSIGNEE(S): Hitachi Chemical Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08211599	A2	19960820	JP 1995-19131	19950207
PRIORITY APPLN. INFO.:			JP 1995-19131	19950207
AB	The compn. comprises (A) a copolymer obtained from an unsatd. carboxylic acid and an another unsatd. monomer, (B) a monomer contg. .gtoreq.1 unsatd. linkage, (C) a photopolymn. initiator, (D) a dye of .gtoreq.200 a thermal decompr. temp. and .gtoreq.5 light resistance (in its color index), and (E) a thermosetting agent crosslinking at 130-250.degree.. The image-forming material, obtained from the resin compn. by applying it on a transparent substrate followed by drying, is also claimed. The color filter is manufd. by repeated steps of; laminating the photosensitive resin layer on a transparent substrate, exposing the resin layer with an active beam through a photomask, exfoliating a support, developing the resin layer, and heating the developed image at 130-250.degree.. The color filter. manufd. by above process, is also claimed. The color filter shows high contrast without blurring.			
IT	72208-25-4			
	RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)			
	(manuf. of color filter from colored photoresist compn. with crosslinking agent)			
RN	72208-25-4 CAPLUS			
CN	Benzeneethanaminium, 4-[[3-chloro-4-[(2-cyanoethyl)amino]phenyl]azo]-N,N,N-trimethyl-.beta.-oxo-, chloride (9CI) (CA INDEX NAME)			



● Cl<sup>-</sup>

IC ICM G03F007-004  
 ICS G03F007-004; G02B005-20; G02F001-1335  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST color photo resist compn filter; crosslinking photoresist thermosetting color  
 IT Optical filters  
     (manuf. of color filter from colored photoresist compn. with crosslinking agent)  
 IT Resists  
     (photo-, manuf. of color filter from colored photoresist compn. with crosslinking agent)  
 IT 26352-06-7, Ethyl acrylate-ethyl methacrylate-methacrylic acid copolymer  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
     (binder resin; manuf. of color filter from colored photoresist compn. with crosslinking agent)  
 IT 531-18-0, Hexamethylol melamine  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); RCT (Reactant); TEM (Technical or engineered material use); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
     (crosslinking agent; manuf. of color filter from colored photoresist compn. with crosslinking agent)  
 IT 1333-73-9, Boric acid sodium salt  
 RL: NUU (Other use, unclassified); USES (Uses)  
     (developer; manuf. of color filter from colored photoresist compn. with crosslinking agent)  
 IT 141946-28-3  
 RL: CAT (Catalyst use); DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
     (initiator; manuf. of color filter from colored photoresist compn. with crosslinking agent)  
 IT 183119-40-6P, 2,2-Bis(4-methacryloxyethoxyphenyl)propane; hexamethylolmelamine; 1-(methacryloyloxyethoxycarbonyl)-2-(3'-chloro-2'-hydroxypropoxycarbonyl)benzene copolymer  
 RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
     (manuf. of color filter from colored photoresist compn. with crosslinking agent)  
 IT 41637-38-1, 2,2-Bis(4-methacryloxyethoxyphenyl)propane      54380-33-5

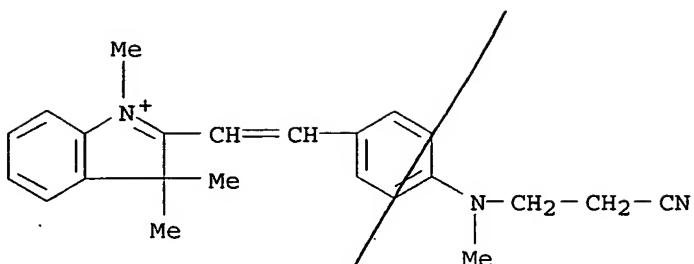
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); RCT (Reactant); TEM (Technical or engineered material use); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
(manuf. of color filter from colored photoresist compn. with crosslinking agent)

IT 12226-78-7, Aizen Spilon Blue GNH 14097-03-1, Basic Red 18  
72208-25-4 95660-05-2, Aizen Spilon Yellow GRLH special  
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(manuf. of color filter from colored photoresist compn. with crosslinking agent)

L19 ANSWER 16 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1994:56566 CAPLUS  
DOCUMENT NUMBER: 120:56566  
TITLE: Stain-resistant compounds as a mordant for dyeing cellulosic fibers  
AUTHOR(S): Malone, C. Paul  
CORPORATE SOURCE: Coll. Hum. Resour., Univ. Delaware, Newark, DE, 19716, USA  
SOURCE: Colourage (1993), 40(5), 7-8, 10-11  
CODEN: COLOBG; ISSN: 0010-1826  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Pretreatment of cellulosic fibers with stain-resist compds., such as Mesitol NBS (I), increases the pickup of basic dyes from soln. by acting as a mordant. Phenolic groups of I bond to the cellulose, leaving SO<sub>3</sub>H groups free to bind the basic amine groups in the dyes. Since treatment with I does not interfere with direct dyeing, the fibers can be topped with basic dyes after direct dyeing and I treatment, giving brilliant colorations.

IT 12217-48-0, C.I. Basic Red 14  
RL: USES (Uses)  
(dyeing of cellulosic fibers with, stain resists as mordants for)

RN 12217-48-0 CAPLUS  
CN 3H-Indolium, 2-[2-[4-[(2-cyanoethyl)methylamino]phenyl]ethenyl]-1,3,3-trimethyl-, chloride (9CI) (CA INDEX NAME)



CC 40-6 (Textiles and Fibers)  
ST cellulose fiber pretreatment basic dyeing  
IT Dyeing  
(of cellulosic fibers with basic dyes, stain-resistant compds. as  
mordants for)  
IT 12217-48-0, C.I. Basic Red 14 61901-57-3, C.I. Basic Green 3  
61901-60-8, C.I. Basic Orange 26  
RL: USES (Uses)  
(dyeing of cellulosic fibers with, stain **resists** as mordants  
for)  
IT 31455-16-0, Mesitol NBS  
RL: USES (Uses)  
(stain-resist, for cellulosic fibers, mordant activity in basic dyeing  
of)

I19 ANSWER 17 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1992:417302 CAPLUS  
DOCUMENT NUMBER: 117:17302  
TITLE: Water-soluble bisazide-crosslinked photosensitive  
composition containing alkoxyaminosilane  
INVENTOR(S): Miyazaki, Chuichi; Suzuki, Motoyuki  
PATENT ASSIGNEE(S): Sanyo Chemical Industries, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 03089350	A2	19910415	JP 1989-227661	19890901

PRIORITY APPLN. INFO.: JP 1989-227661 19890901  
AB The title compn. contains a water-sol. polymer, a water-sol. bisazide  
photocrosslinking agent, and water-sol.  $(R_1O)_3-nSiR_2nC_3H_6(NHA)pNHCH_2CHXY$   
(X and/or Y = electron-attractive group, other is H; R1 = Me, Et; R2 =  
C1-10 alkyl; A = C2-10 alkylene; p = 0-10; n = 0-2). Thus, a compn. of K

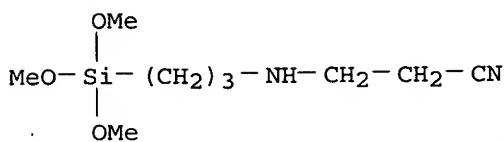
90 (vinyl polymer), Na 4,4'-diazidostilbene-2,2'-disulfonate, Nonipol 160, (MeO)<sub>3</sub>SiC<sub>3</sub>H<sub>6</sub>NHCH<sub>2</sub>CH<sub>2</sub>CN, and water showing storage stability was applied onto a glass plate, exposed, and developed by water to give a precise pattern.

IT 140938-83-6 140938-84-7

RL: USES (Uses)  
(water-sol. resist from, with storage stability, bisazide crosslinker in)

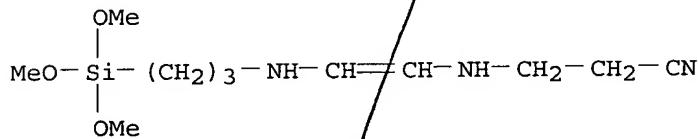
RN 140938-83-6 CAPLUS

CN Propanenitrile, 3-[(3-(trimethoxysilyl)propyl)amino]- (9CI) (CA INDEX NAME)



RN 140938-84-7 CAPLUS

CN 2-Oxa-7,10-diaza-3-silatridec-8-ene-13-nitrile, 3,3-dimethoxy- (9CI) (CA INDEX NAME)



IC ICM G03F007-008

ICS G03F007-021; G03F007-075

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST water soluble bisazide crosslinked resist; alkoxyaminosilane water soluble photoresist; siloxane water soluble resist durability; storage stability water soluble resist

IT Crosslinking agents

(water-sol. bisazide, for water-sol. resist, with storage stability, aminosiloxane in)

IT Siloxanes and Silicones, uses

RL: USES (Uses)  
(amino, water-sol. resist from, bisazide crosslinker in, with storage stability)

IT Resists

(photo-, water-sol. polymer and water-sol. bisazide crosslinker and water-sol. alkoxy silane for, with storage stability)

IT 9002-89-5, EG 40 9003-39-8, K 90 (Vinyl polymer) 9016-45-9, Nonipol 160 15874-22-3 120920-27-6, Sanfloc N 520P

RL: USES (Uses)

(water-sol. resist from, with storage stability, amino-substituted siloxane in)

IT 76300-99-7 140938-83-6 140938-84-7 140938-85-8

RL: USES (Uses)

(water-sol. resist from, with storage stability, bisazide crosslinker in)

L19 ANSWER 18 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1991:594216 CAPLUS

DOCUMENT NUMBER: 115:194216

TITLE: Additives to photosensitive resins or to undercoat for photosensitive resins

INVENTOR(S): Furuta, Yasushi; Tamura, Yoshisada

PATENT ASSIGNEE(S): Nippon Chemical Industrial Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

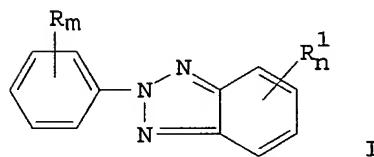
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03064753	A2	19910320	JP 1989-200440	19890803
PRIORITY APPLN. INFO.:			JP 1989-200440	19890803
OTHER SOURCE(S):		MARPAT 115:194216		
GI				

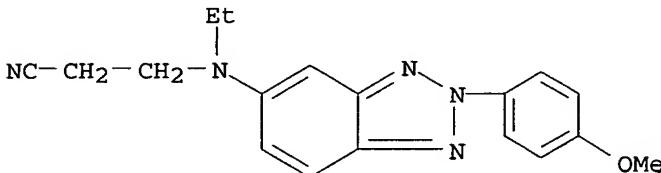


AB The title additives are triazole compds. I (R, R1 = H, halo, alkyl, alkoxy, alkylamino; m = 1-5; n = 1-4;  $\geq$  1 of R and R1 are alkylamino). These triazole compds. are resistant to heat and have controllable solvent solv., and are very useful as antireflective absorbing agents for increasing accuracy of photoresist patterning. Thus, a compn. contg. 3 g p-hydroxydiphenylamine-pentabutoxymethyl hydroxymethylmelamin and 0.55 g 2-(p-dimethylaminophenyl)benztriazole was applied on Al-coated Si wafer. A photoresist obtained by coating the wafer with novolak-.alpha.-naphtho quinonediazide photoresist was patternwise exposed and developed with aq. Me4NOH, to obtain pattern with higher accuracy than from a resist with undercoat contg. coumarin instead of the triazole compd.

IT 136578-85-3

RL: USES (Uses)  
 (as antireflection agent for photoresists)

RN 136578-85-3 CAPLUS

CN Propanenitrile, 3-[ethyl[2-(4-methoxyphenyl)-2H-benzotriazol-5-yl]amino]-  
 (9CI) (CA INDEX NAME)IC ICM G03F007-004  
 ICS G03F007-11CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

ST photoresist antireflection agent triazole deriv

IT Resist  
 (photo-, triazole derivs. as antireflection agents for)

IT 16675-45-9 136578-84-2 136578-85-3 136578-86-4 136578-87-5

RL: USES (Uses)  
 (as antireflection agent for photoresists)

IT 121-69-7, Dimethylaniline, uses and miscellaneous

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (coupling of, with diazotized nitroaniline, triazole deriv. as  
 antireflection additive to photoresists from)

IT 6375-46-8, m-Diethylaminoacetanilide

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (coupling of, with diazotized toluidine, triazole deriv. as  
 antireflection additive to photoresists from)

IT 106-49-0, p-Toluidine, uses and miscellaneous

RL: PRP (Properties)  
 (diazotization and coupling of, with acetanilide deriv., triazole  
 deriv. as antireflection additive to photoresists from)

IT 88-74-4, o-Nitroaniline

RL: PRP (Properties)  
 (diazotization and coupling of, with aniline deriv., triazole deriv. as  
 antireflection additive to photoresists from)

IT 3010-38-6P

RL: PREP (Preparation)  
 (prepn. and ring closure by redn. of, triazole deriv. as antireflection  
 additive to photoresists from)

L19 ANSWER 19 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1991:523866 CAPLUS

DOCUMENT NUMBER: 115:123866

TITLE: Photoresist compositions with high sensitivity,  
 resolution, and thermal stability

INVENTOR(S): Sakaguchi, Shinji; Adachi, Keiichi

PATENT ASSIGNEE(S) : Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

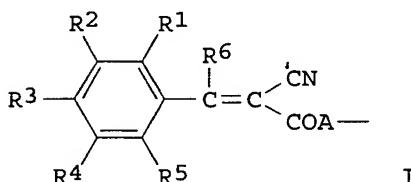
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02275453	A2	19901109	JP 1989-97876	19890418
PRIORITY APPLN. INFO.:			JP 1989-97876	19890418
OTHER SOURCE(S):		MARPAT 115:123866		

GI



AB The title photoresist compns. contain alkali-sol. resins and cyanocinnamate photosensitive compds. QB [ Q = I; R1-5 = H, halogen, OH, alkyl, alkoxy, alkylthio, aralkyl, aryl, amino, mono- or dialkylamino (not in the case of A = O), acylamino, alkylcarbamoyl, arylcarbamoyl, alkylsulfamoyl, arylsulfamoyl, carboxy, cyano, nitro, acyl, alkyloxycarbonyl, aryloxycarbonyl, acryloxy; any two of R1-5 may form 5- to 7-membered ring; R6 = H, lower alkyl, cyano; A = O, NR7; B = H, C1-3 (un)substituted aliph. group, OnR8; R7 = B; R8 = C2-20 (n + 1)-valent group; n = 1-3] or quinone azide; the alkali-sol. resin may be a cresol novolak.

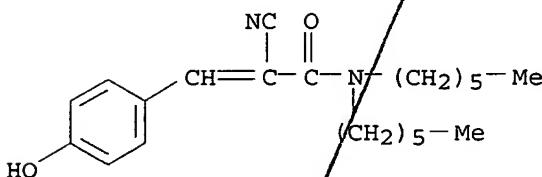
IT 135777-93-4

RL: USES (Uses)

(photoresist contg. alkali-sol. resins and, with high sensitivity and resoln.)

RN 135777-93-4 CAPLUS

CN 2-Propenamide, 2-cyano-N,N-dihexyl-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-004  
ICS G03F007-022; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST photoresist cyanocinnamate; cresol novolak photoresist cyanocinnamate  
IT Phenolic resins, uses and miscellaneous  
RL: USES (Uses)  
(photoresist contg. cyanobenzaldehyde derivs. and, with high sensitivity and resoln.)  
IT Resists  
(photo-, alkali-sol. resins and cyanocinnamates, with high sensitivity and resoln.)  
IT 135777-87-6 135777-88-7 135777-89-8 135777-90-1 135777-91-2  
135777-92-3 135777-93-4 135777-94-5 135802-43-6  
135802-44-7  
RL: USES (Uses)  
(photoresist contg. alkali-sol. resins and, with high sensitivity and resoln.)  
IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 120415-03-4, FH  
6100  
RL: USES (Uses)  
(photoresist contg. cyanobenzaldehyde derivs. and, with high sensitivity and resoln.)  
IT 123-08-0, p-Hydroxybenzaldehyde  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with dodecyl cyanoacetate)  
IT 60180-50-9, Dodecyl cyanoacetate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with hydroxybenzaldehyde)  
IT 15666-97-4, Octyl cyanoacetate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with hydroxymethoxybenzaldehyde)  
IT 121-33-5, 4-Hydroxy-3-methoxybenzaldehyde  
RL: RCT (Reactant); RACT (Reactant or reagent).  
(reaction of, with octyl cyanoacetate)

L19 ANSWER 20 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1991:482278 CAPLUS  
DOCUMENT NUMBER: 115:82278  
TITLE: Positive-working photoresist compositions  
INVENTOR(S): Oie, Masayuki; Kawada, Masaji; Yamada, Takamasa  
PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03025445	A2	19910204	JP 1989-160426	19890622

PRIORITY APPLN. INFO.:

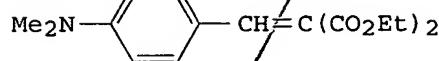
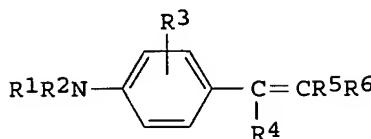
JP 1989-160426

19890622

OTHER SOURCE(S):

MARPAT 115:82278

GI



AB The title compns. contain alkali-sol. phenol resins, quinonediazides, and compds. I [R1-2 = alkyl, cyanoalkyl; R3 = H, alkyl, halo; R4 = H, cyano; R5-6 = alkoxy carbonyl, cyano (gtoreq.1 of R5-6 = alkoxy carbonyl)]. These compn. contg. I as light-absorbing agents are suitable for fine patterning, suppressing the effect of reflection. Thus, a soln. contg. m-cresol-p-cresol-novolak 100, 2,3,4,4'-tetrahydroxybenzophenone 90% esterified with 1,2-naphthoquinonediazide-5-sulfonic acid 18, and II 5 parts was applied on Si wafer and prebaked to form a 1.17-.mu.m-thick resist layer. Patternwise exposure and development with aq. Me4NOH gave pattern with 1.15-.mu.m thickness resolving 0.5-.mu.m line-and space. Dry etching in CF4-H2 mixt. transferred the pattern to substrate.

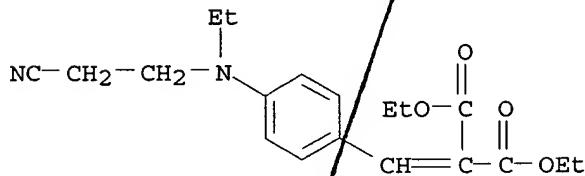
IT 135199-06-3

RL: USES (Uses)

(light-absorbing agent, pos.-working photoresists contg.)

RN 135199-06-3 CAPLUS

CN Propanedioic acid, [(4-[(2-cyanoethyl)ethylamino]phenyl)methylene] - , diethyl ester (9CI) (CA INDEX NAME)

IC ICM G03F007-022  
ICS G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photoresist pos light absorbing agent

IT Resist

(photo- pos.-working, light-absorbing agents in, for increased resoln.)

IT 3435-56-1 135199-06-3

RL: USES (Uses)

(light-absorbing agent, pos.-working photoresists contg.)

L19 ANSWER 21 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1990:468401 CAPLUS  
 DOCUMENT NUMBER: 113:68401  
 TITLE: Photosensitive solder resist compositions  
 INVENTOR(S): Watanabe, Katsumi; Awaji, Kyoichi; Kubota, Hiroyuki;  
 Tsuruta, Hiroaki  
 PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

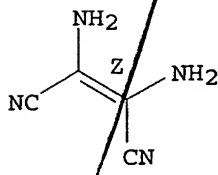
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02023351	A2	19900125	JP 1988-173193	19880712
PRIORITY APPLN. INFO.:			JP 1988-173193	19880712

AB Solder resist compns. consist of (a) products of esterification of copolymers [consisting of .1toreq.10 mol% maleic (and/or itaconic) anhydride with .1toreq.90 mol% radical-polymg. monomers], by 0.05-0.95 equiv. of radical-polymg. monohydric alcs. (and/or monoepoxy compd.) which may optionally include nonpolymg. monohydric alcs. (or monoepoxy compds.), (b) mono- or polyepoxy compds., (c) a potential heat-curing agent, a solid heat-curing agent and/or a promotor for curing, (d) an optional org. solvent, and/or (e) ethylenic unsatd. compds. without epoxy groups. These compns. are developable with weak alkali and provide excellent solder resists. Thus, SMA1000 (maleic anhydride-styrene copolymer) and 2-hydroxyethyl acrylate were heated together to obtain a 54% soln. of an ester. A resist compn. was obtained by mixing this soln. with tetramethylolmethane triacrylate and other agents. A Cu-coated epoxy-glass circuit board was coated with this compn. by silk screen printing, prebaked, patternwise exposed, and developed with 1% Na<sub>2</sub>CO<sub>3</sub> at 30.degree.. The postbaked resist pattern showed firm adhesion, resistance to heat, resistance to solvents and chems., and was used for solder plating with good results.

IT 1187-42-4, Diaminomaleonitrile  
 RL: USES (Uses)  
 (heat-curing agent, solder mask photoresists contg.)

RN 1187-42-4 CAPLUS  
 CN 2-Butenedinitrile, 2,3-diamino-, (2Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IC ICM G03F007-033

ICS C09D011-00; G03F007-038; H05K003-28  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 38  
ST photoresist solder mask polymer compn; curing agent solder mask  
photoresist  
IT Epoxy resins, uses and miscellaneous  
RL: USES (Uses)  
(photosensitive solder resists contg. curing agents and)  
IT Soldering  
(resists for, photosensitive compns. contg. curing agents for prodn.  
of)  
IT Resists  
(photo-, polymer compns. contg. curing agents for)  
IT 80-08-0 461-58-5, Dicyandiamide 1071-93-8 1187-42-4,  
Diaminomaleonitrile 6674-22-2, 1,8-Diazabicyclo(5,4,0)undecene-7  
14024-63-6, Zinc acetylacetone  
RL: USES (Uses)  
(heat-curing agent, solder mask photoresists contg.)  
IT 2425-01-6, Hydroquinone diglycidyl ether 2451-62-9, Triglycidyl  
isocyanurate 3524-68-3, Tetramethylolmethane triacrylate 3878-43-1  
51204-92-3 89338-58-9, Epiclon N775 91594-04-6, Epiclon N695  
106209-33-0D, SMA1000, esters with acrylic compds. 120919-92-8  
120919-93-9  
RL: USES (Uses)  
(photosensitive solder resists contg. curing agents and)

L19 ANSWER 22 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1989:644338 CAPLUS  
DOCUMENT NUMBER: 111:244338  
TITLE: Styryl compounds, process for preparing the same and  
photoresist compositions comprising the same  
INVENTOR(S): Yamamoto, Takanori; Furuta, Akihiro; Konishi, Shinji;  
Hioki, Takeshi; Hanawa, Ryotaro; Tomioka, Jun  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
SOURCE: Eur. Pat. Appl., 25 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 323631	A2	19890712	EP 1988-121773	19881228
EP 323631	A3	19891213		
EP 323631	B1	19930811		
	R: BE, DE, FR, GB, IT, NL			
JP 01172948	A2	19890707	JP 1987-332110	19871228
JP 02028142	A2	19900130	JP 1988-177752	19880715
US 5218136	A	19930608	US 1988-290264	19881227
EP 510726	A1	19921028	EP 1992-110557	19881228

EP 510726 B1 19960313

R: BE, DE, FR, GB, IT, NL

CA 1329599 A1 19940517

CA 1988-587099 19881228

SG 77100 A1 20001219

SG 1996-1577 19881228

US 5354644 A 19941011

US 1992-937684 19920901

PRIORITY APPLN. INFO.:

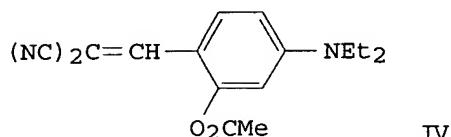
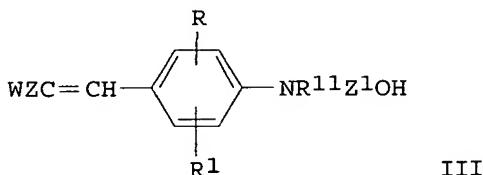
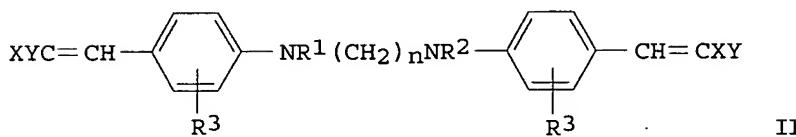
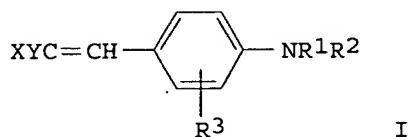
JP 1987-332110 A 19871228

JP 1988-177752 A 19880715

US 1988-290264 A3 19881227

OTHER SOURCE(S): MARPAT 111:244338

GI



AB Photoresist compns. for forming fine patterns on a substrate having high reflectance without causing halation or notching contain a styryl compd. of the formula I, II, or III (R1, R2 = H, (un)substituted alkyl, (un)substituted alkenyl, (un)substituted aralkyl, or together may form a ring; R3 = OH, CO<sub>2</sub>R<sub>4</sub>, or OSi(R<sub>4</sub>)<sub>3</sub> where R<sub>4</sub> = alkyl; X, Y = CN, CO<sub>2</sub>R<sub>5</sub>, CONR<sub>6</sub>R<sub>7</sub>, (un)substituted p-nitrobenzyl, (un)substituted benzoyl, or 2-benzimidazolyl where R<sub>5</sub> = alkyl and R<sub>6</sub>, R<sub>7</sub> = H, Ph, or (un)substituted lower alkyl; R<sub>8</sub> = H, (un)substituted C<sub>1</sub>-10 alkyl, alkenyl, or aralkyl; R<sub>9</sub>, R<sub>10</sub> = H, (un)substituted lower alkyl, (un)substituted lower alkoxy, amido, or halogen; W, Z = an electron-attracting group; Z<sub>1</sub> = substituted C<sub>1</sub>-10-alkylene) as a light absorber which neither sublimes during prebaking nor ppts. during storage. The resulting photoresist is stable toward the prebaking of the substrate and suffers from less deterioration of

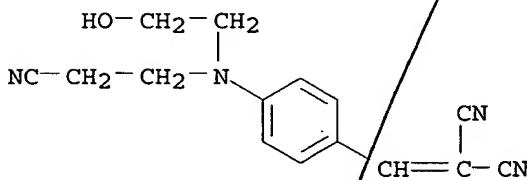
sensitivity caused by the addn. of the light absorber. Thus, the photoresist PF-6200 contg. IV was tested to show excellent antihalation effect, no sublimation upon prebaking, and excellent sensitivity.

IT 63619-37-4P 124079-91-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and use of, as light absorber in photoresists)

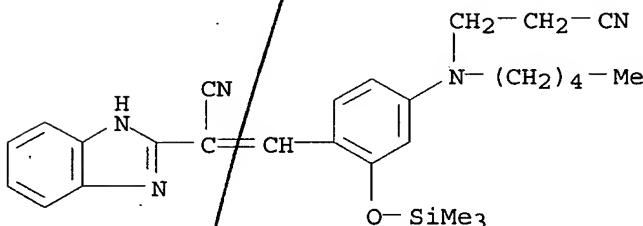
RN 63619-37-4 CAPLUS

CN Propanedinitrile, [[4-[(2-cyanoethyl)(2-hydroxyethyl)amino]phenyl]methylene]- (9CI) (CA INDEX NAME)



RN 124079-91-0 CAPLUS

CN 1H-Benzimidazole-2-acetonitrile, .alpha.-[[4-[(2-cyanoethyl)pentylamino]-2-[(trimethylsilyl)oxy]phenyl]methylene]- (9CI) (CA INDEX NAME)



IC ICM C07C121-75

ICS C07F007-18; C07C103-68; C07C101-453; G03F007-10

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST styryl compd light absorber photoresist; antihalation styryl compd photoresist

IT Resist

(photo-, contg. styryl compds. as light absorbers)

IT 108-24-7, Acetic anhydride

RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification by, of ethylhydroxyethylaniline)

IT 97-50-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, by acetic anhydride)

IT 124079-84-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and esterification of)

IT 63619-35-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and hydrolysis of)

IT 38954-40-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and reaction of, with malonic nitrile)

IT 25712-38-3P 42005-48-1P 63619-33-0P 63619-34-1P 63619-37-4P  
124079-85-2P 124079-86-3P 124079-87-4P 124079-88-5P 124079-89-6P  
124079-90-9P 124079-91-0P 124079-92-1P 124079-93-2P  
124079-94-3P 124079-95-4P 124079-96-5P 124079-97-6P 124122-85-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and use of, as light absorber in photoresists)

IT 4746-32-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with chlorohexanol)

IT 57489-51-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with dicyanomethylene)

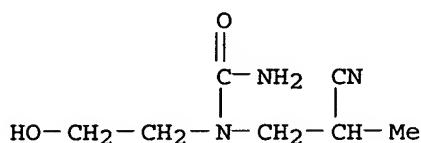
IT 109-77-3, Propanedinitrile  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with dimethylaminomethoxycarbonylbenzaldehyde)

IT 2009-83-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with hexylaminoaniline)

L19 ANSWER 23 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1989:505506 CAPLUS  
DOCUMENT NUMBER: 111:105506  
TITLE: Functional monomers and polymers CLXVIII. Syntheses and photoreactions of poly(methacrylates) containing thymine bases  
AUTHOR(S): Moghaddam, Minoo Jalili; Hozumi, Shigeo; Inaki, Yoshiaki; Takemoto, Kiichi  
CORPORATE SOURCE: Fac. Eng., Osaka Univ., Suita, 565, Japan  
SOURCE: Polymer Journal (Tokyo, Japan) (1989), 21(3), 203-13  
CODEN: POLJB8; ISSN: 0032-3896  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Polymethacrylates having thymine derivs. were studied for photodimerizations of thymine units in soln. and in the film state, and for photolithog. sensitivity tests for their applicability to neg. type photoresists. In homopolymers and copolymers, thymine bases were attached to the polymer chain at positions N1 or N3. Among these polymers, the alternate copolymer indicated the highest photosensitivity. The results are discussed from the viewpoint of intra- and/or intermol. photodimerization and the quantum yields in soln. and in the film state.  
IT 122353-46-2P, 1-(2-Hydroxyethyl)-1-(2-cyanopropyl)urea  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and reaction of, in prodn. of polymethacrylates contg. thymine bases for lithog. photoresist)

RN 122353-46-2 CAPLUS  
CN Urea, N-(2-cyanopropyl)-N-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)



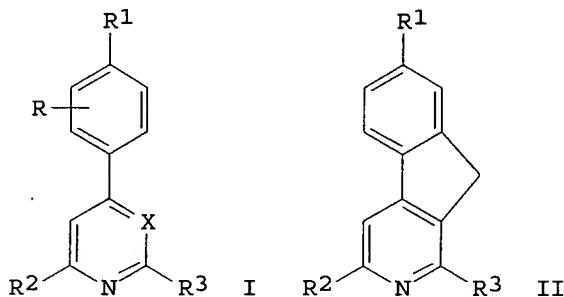
CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35  
ST methacrylate thymine deriv polymer photoreaction; lithog methacrylate thymine deriv polymer; photoresist methacrylate thymine deriv polymer  
IT Resists  
(photo-, polymethacrylates contg. thymine bases)  
IT Dimerization  
(photochem., of polymethacrylates contg. thymine bases)  
IT 25750-81-6 122366-95-4 122366-96-5 122366-97-6 122366-98-7  
RL: USES (Uses)  
(photodimerization and lithog. photosensitivity of)  
IT 122353-46-2P, 1-(2-Hydroxyethyl)-1-(2-cyanopropyl)urea  
122353-47-3P, 5,6-Dihydro-1-(2-hydroxyethyl)thymine  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and reaction of, in prodn. of polymethacrylates contg. thymine bases for lithog. photoresist)  
IT 4160-72-9P, 1-Methylthymine 122353-48-4P, 1-Methyl-3-(2-hydroxyethyl)thymine 122353-49-5P, 1-Methyl-3-(2-methacryloyloxyethyl)thymine  
RL: PREP (Preparation)  
(prepn. of, for prodn. of polymethacrylates contg. thymine bases for lithog. photoresist)  
IT 22441-51-6P, 1-(2-Hydroxylethyl)thymine  
RL: PREP (Preparation)  
(prepn. of, for thymine base-contg. polymethacrylate fabrication for lithog. photoresist)  
IT 590-28-3, Potassium cyanate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with (hydroxyethylamino)methyl propynitrile)  
IT 122353-45-1, 3-(2-Hydroxyethylamino)-2-methylpropynitrile  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with potassium cyanate)

L19 ANSWER 24 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1989:222627 CAPLUS  
DOCUMENT NUMBER: 110:222627  
TITLE: Photopolymerizable materials for photoresists and lithographic plates  
INVENTOR(S): Aldag, Reinhard; Neumann, Peter; Boettcher, Andreas;

Bluemel, Thomas; Seitz, Friedrich; Raulfs, Friedrich  
Wilhelm  
PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.  
SOURCE: Eur. Pat. Appl., 16 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 291880	A2	19881123	EP 1988-107720	19880513
EP 291880	A3	19890607		
EP 291880	B1	19920325		
R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
DE 3717036	A1	19881208	DE 1987-3717036	19870521
US 4940649	A	19900710	US 1988-196079	19880517
JP 63311246	A2	19881220	JP 1988-119407	19880518
PRIORITY APPLN. INFO.:			DE 1987-3717036	19870521

GI



AB Photopolymerizable materials esp. suitable for the prodn. of photoresist layers and lithog. plates are composed of .gtoreq.1 photopolymerizable, olefinically unsatd. org. compd., optionally a polymer binder, a photopolylmn. initiator, a color-forming system from a color former and a photooxidizing agent, other additives, and a 4-pyridine deriv. (I or II; R = H, alkyl, or alkoxy; R1 = alkyl, alkoxy, CF3, Ph, substituted amino, or N-contg. heterocyclyl; R2, R3 = alkyl, alkoxy, hydroxyalkyl, substituted amino, N-contg. heterocyclyl, and the like; X = CH or N). Thus, a Cu plate was coated with a soln. contg. a Bisphenol A diglycidyl ether-phthalic acid-glycidyl methacrylate oligomer, trimethylolpropane triacrylate, hexanediol biglycidyl ether bismethacrylate, methacrylic acid-Me methacrylate-N-vinylpyrrolidone copolymer, benzophenone, leuco crystal violet, Sicomet Patent Blue, 1-methoxy-2-picolinium p-toluenesulfonate, 4-dimethylaminophenyl-2,6-diphenylpyridine (sensitizer), MeOH, and EtOAc to give a dry-film resist. The material was then imagewise exposed and developed to show an optical d. of 1.13 and a

.DELTA. optical d. of 1.04.

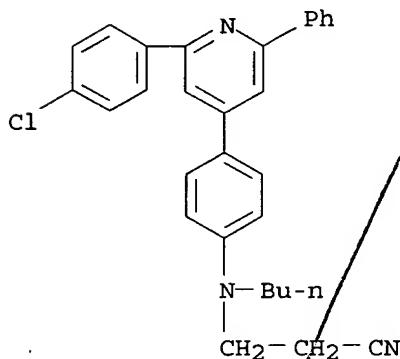
IT 115750-99-7

### RL: USES (Uses)

(photopolymerizable compns. /contg. sensitizer from, for photoresists)

RN 115750-99-7 CAPLUS

CN Propanenitrile, 3-[butyl[4-[2-(4-chlorophenyl)-6-phenyl-4-pyridinyl]phenyl]amino]- (9CI) (CA INDEX NAME)



IC ICM G03E007-10

TCS G03C001-68

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photopolymerizable recording compn sensitizer phenylpyridine; photoresist sensitizer phenylpyridine deriv; lithog plate sensitizer phenylpyridine deriv; pyridine phenyl sensitizer photopolymerizable compn

## IT Lithographic plates

(photopolymerizable compns. contg. phenylpyridine deriv. sensitizers for fabrication of)

## IT Resists

(photo-, photopolymerizable compns. contg. phenylpyridine deriv. sensitizers for)

IT 119-61-9, Benzophenone, uses and miscellaneous 603-48-5, Leuco crystal  
violet 1707-68-2 4687-94-9 15625-89-5, Trimethylolpropane  
triacrylate 25068-64-8 25322-25-2, Acrylic acid-methyl methacrylate  
copolymer 25985-99-3, 1-Methoxy-2-picolinium p-toluenesulfonate  
29312-59-2 120504-06-5 120504-07-6 120504-08-7 120515-27-7

### RL: USES (Uses)

(photopolymerizable compns. contg. phenylpyridine deriv. sensitizers and, for photoresists)

IT 108780-83-2 115750-99-7 120504-09-8 120504-10-1

## RL: USES (Uses)

(photopolymerizable compns. contg. sensitizer from, for photoresists)

IT 110-86-1D, Pyridine, Ph derivs.

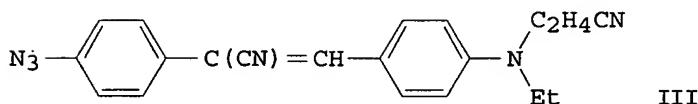
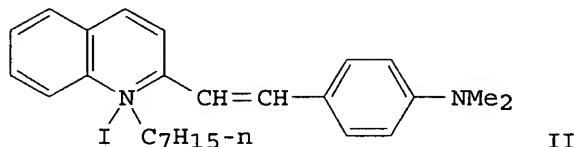
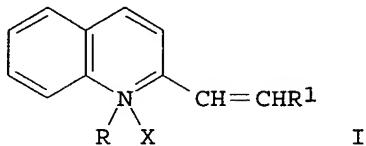
### RL: USES (Uses)

(photopolymerizable compns. contg. sensitizers from, for photoresists)

L19 ANSWER 25 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1989:31435 CAPLUS  
 DOCUMENT NUMBER: 110:31435  
 TITLE: Photodecolorizing azide-dye compositions and pattern formation using the same  
 INVENTOR(S): Kumagai, Akitoshi; Niki, Hiroichi  
 PATENT ASSIGNEE(S): Toshiba Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63146028	A2	19880618	JP 1986-292486	19861210
PRIORITY APPLN. INFO.:			JP 1986-292486	19861210
OTHER SOURCE(S):		MARPAT 110:31435		

GI



AB A photosensitive compn. that decolors upon irradn. consists of a styryl dye of the formula I` (R = alkyl; R¹ = mono- or disubstituted phenyl; X = halo), a binder resin, and a azide compd., and the patterning method involves coating of the above compn. on a resist layer and patterning by selective irradn. The upper photosensitive layer does not evolve gas upon irradn. and is stable in storage; hence its use allows an increase in the accuracy and resoln. of the patterns. Thus, a Si wafer coated with a pos.-working resist and a compn. contg. the styryl dye II 1.0, the azide compd. III 1.2, PMMA 3.0, and trichloroethane 100 parts, dried, and irradiated through a neg. pattern with 436-nm light. The developed pattern showed a resoln. of 0.7-.μ.m line widths vs. 1.2 .μ.m for a

control without the photosensitive dye layer.

IT 107000-06-6

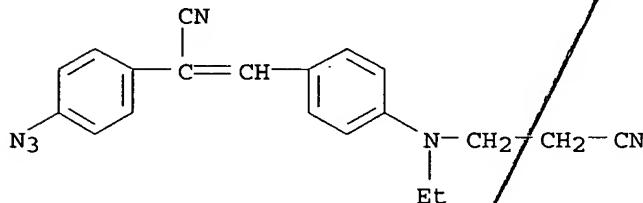
RL: USES (Uses)

(pos.-working **resists** coated with photosensitive compn.

contg. styryl dye and, for improved pattern accuracy and resoln.)

RN 107000-06-6 CAPLUS

CN Benzeneacetonitrile, 4-azido-.alpha./-[ [4-[(2-cyanoethyl)ethylamino]phenyl]methylene] - (9CI) (CA INDEX NAME)



IC ICM G03C001-00

ICS G03C001-72; G03F007-00; H01L021-30

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST resist pos working improved resoln; azide dye compn pattern formation

IT Resist

(photo-, pos.-working, with photodecolorizable dye-azide compn. coating, for improved pattern accuracy and resoln.)

IT 118063-65-3 118104-61-3 118104-62-4

RL: USES (Uses)

(pos.-working **resists** coated with photosensitive compn. contg. azide compd. and, for improved pattern accuracy and resoln.)

IT 23034-42-6 107000-06-6 109478-62-8

RL: USES (Uses)

(pos.-working **resists** coated with photosensitive compn. contg. styryl dye and, for improved pattern accuracy and resoln.)

L19 ANSWER 26 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1987:205234 CAPLUS

DOCUMENT NUMBER: 106:205234

TITLE: Photopolymerizable recording materials with decreased cold flow

INVENTOR(S): Hilger, Manfred

PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 13 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO. DATE

DE 3510219	A1	19860925	DE 1985-3510219	19850321
EP 195322	A2	19860924	EP 1986-102976	19860306
EP 195322	A3	19870527		
EP 195322	B1	19911030		
R: DE, FR, GB				
JP 61219952	A2	19860930	JP 1986-61022	19860320
US 4950580	A	19900821	US 1987-89034	19870824
PRIORITY APPLN. INFO.:			DE 1985-3510219	19850321
			US 1986-840051	19860317

OTHER SOURCE(S): CASREACT 106:205234

AB The cold flow of photopolymerizable recording materials composed of a support and a solid, dry photopolymerizable layer composed of a polymer binder that is sol. in aq. alk. soln., a radical-polymerizable acrylic acid or methacrylic acid ester of a polyhydric alc., and an initiator for the photoinitiated radical polymn. is decreased by treatment of the photopolymerizable layer with NH<sub>3</sub> or an oxidizing agent. A PET film support was coated with a soln. contg. hexyl methacrylate-methacrylic acid-styrene copolymer, a polymerizable oligourethane from 2,2,4-trimethylhexamethylene diisocyanate, triethylene glycol, and hydroxyethyl methacrylate, diethylene glycol mono-2-ethylhexyl ether 2,6-dihydroxybenzoate, water, butanone, 16% aq. NH<sub>3</sub>, 9-phenylacridine, and a blue azo dye to give a dry-film photoresist which showed practically no deformation upon loading with a 1000 g wt. for 16 h.

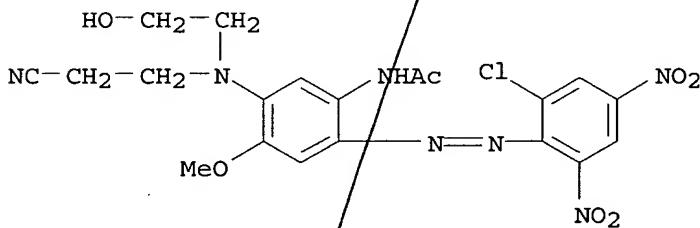
IT 23807-28-5

RL: USES (Uses)

(photoresists contg., dry-film, aq. ammonia treatment of, for decreased cold flow)

RN 23807-28-5 CAPLUS

CN Acetamide, N-[(2-[(2-chloro-4,6-dinitrophenyl)azo]-5-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



IC ICM G03F007-00

ICS G03C001-68

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photopolymer photoimaging compn cold flow; photoresist dry film cold flow

IT Oxidizing agents

(dry-film photoresists treated with, for decreased cold flow)

IT Photoimaging compositions and processes

(photopolymer, treatment of, by ammonia or oxidizing agent for decreased cold flow)

IT Resists

(photo-, dry-film, treatment of, by ammonia or oxidizing agent for decreased cold flow)

IT 1336-21-6, Ammonium hydroxide 7722-64-7, Potassium permanganate  
RL: USES (Uses)  
(dry-film photoresists treated with, for decreased cold flow)

IT 73539-63-6  
RL: USES (Uses)  
(oligomeric, dry-film photoresist contg., aq. ammonia treatment of, for decreased cold flow)

IT 602-56-2, 9-Phenylacridine 23807-28-5 58601-54-0, Hexyl methacrylate-methacrylic acid-styrene copolymer 73639-18-6  
RL: USES (Uses)  
(photoresists contg., dry-film, aq. ammonia treatment of, for decreased cold flow)

L19 ANSWER 27 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1987:111371 CAPLUS  
DOCUMENT NUMBER: 106:111371  
TITLE: Photoresist materials  
INVENTOR(S): Adachi, Keiichi; Matsuda, Nobuaki  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61121051	A2	19860609	JP 1984-241765	19841116
PRIORITY APPLN. INFO.:			JP 1984-241765	19841116

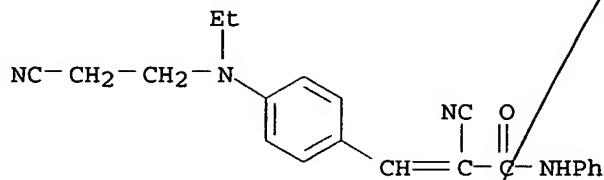
AB Photoresist materials with good contrast, precision, and resoln. contain (A) materials to be etched, (B) photoresist layers (on A) contg. .gtoreq.1 light absorbents, and (C) layers (on B) contg. .gtoreq.1 light-decoloring compds. Thus, HPR-204 (pos.-type photoresist; contg. novolak and .gtoreq.1 o-quinone diazide; solid content 27.8%) was mixed with 1.2% (C6H13)2N-p-C6H4CH:C(CN)2 to obtain a photoresist. The photoresist was coated on an Al-evapd. 4-in. Si wafer (film thickness 1.0 .mu.), prebaked 30 min at 90.degree. under N, coated with a toluene soln. contg. 5% allyl alc.-styrene copolymer and 5% Et2N-p-C6H4CH:N+PhO- (thickness 0.25 .mu.), heat dried, patternwise exposed, and developed, showing high contrast, precision, and resoln.

IT 105394-58-9 105683-24-7

RL: USES (Uses)  
(photoresist with photodecoloring compd. and light absorbent from)

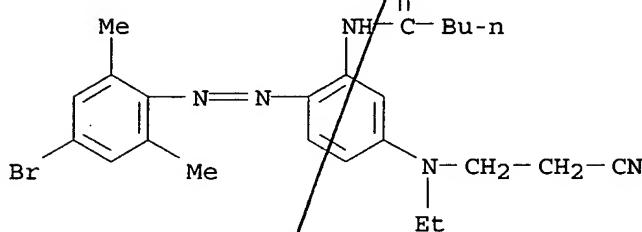
RN 105394-58-9 CAPLUS

CN 2-Propenamide, 2-cyano-3-[4-[(2-cyanoethyl)ethylamino]phenyl]-N-phenyl- (9CI) (CA INDEX NAME)



RN 105683-24-7 CAPLUS

CN Pentanamide, N-[2-[(4-bromo-2,6-dimethylphenyl)azo]-5-[(2-cyanoethyl)ethylamino]phenyl]- (9CI) (CA INDEX NAME)



IC ICM G03C001-00

ICS G03F007-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photoresist material contrast precision resoln; light absorbent photoresist compn; photodecoloring compd photoresist compn

IT Resist

(photo-, contg. photodecoloring compd., for high contrast and precision and resoln.)

IT 93749-84-9 93749-90-7 93749-91-8 105603-91-6

RL: USES (Uses)

(photoresist material contg. photodecoloring compd. from)

IT 60-11-7 102348-86-7 105394-58-9 105683-24-7

RL: USES (Uses)

(photoresist with photodecoloring compd. and light absorbent from)

IT 73928-57-1

RL: USES (Uses)

(photoresist, in presence of light absorbent and photodecoloring compd.)

L19 ANSWER 28 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1987:111364 CAPLUS

DOCUMENT NUMBER: 106:111364

TITLE: Photosensitive compositions

INVENTOR(S): Hirao, Akiko; Onishi, Kanenobu; Isori, Kunihiro

PATENT ASSIGNEE(S): Toshiba Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

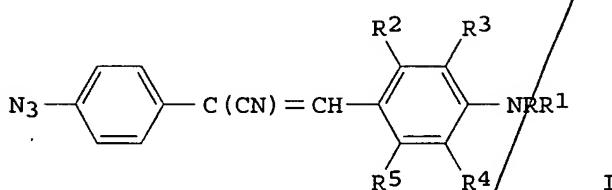
Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61151529	A2	19860710	JP 1984-273228	19841226
PRIORITY APPLN. INFO.:			JP 1984-273228	19841226

GI



AB Photosensitive compns. are composed of .gtoreq.1 alkali-sol. polymer and copolymer which have a PhOH structure and an azide compd. of the formula I (R, R1 = alkyl, aryl, aralkyl, haloalkyl, cyanoalkyl, alkoxylalkyl, R2-R5 = H, alkyl, aryl, aralkyl, OH, alkoxy, halo). The compns. have high photosensitivity and high resolving power in fine pattern (0.5-1.0 .mu.m) formation using 380-450-nm light beams and are useful in prep. photoresists. Thus a Si wafer was coated with a soln. contg. 25 g Maruzen Resin M [poly(vinylphenol)] and 3.75 g 4-azido-N,N-diethylamino-.alpha.-cyanostilbene in 75 g N-methyl-2-pyrrolidone to give a 1.2-.mu.m photoresist layer. After patternwise exposure, the layer was developed in a 1.5% aq. soln. of NMe4OH to give a pattern, which resolved 1.0-.mu.m lines and spaces.

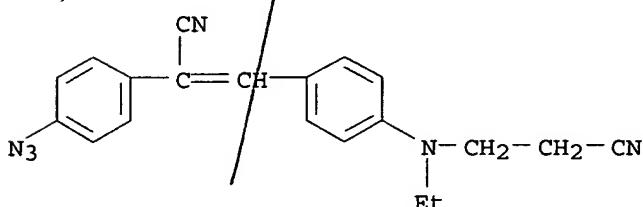
IT 107000-06-6, 4-Azido-4'-(N-2-cyanoethyl-N-ethylamino)-.alpha.-cyanostilbene

RL: USES (Uses)

(photoresist compns. contg. phenolic resin and, for fine pattern formation)

RN 107000-06-6 CAPIUS

CN Benzeneacetonitrile, 4-azido-.alpha.-[[4-[(2-cyanoethyl)ethylamino]phenyl]methylene]- (9CI) (CA INDEX NAME)



IC ICM G03C001-71  
ICS G03F007-08  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST photosensitive compn azidocyanostilbene phenolic resin; photoresist phenolic resin azidocyanostilbene  
IT Phenolic resins, uses and miscellaneous  
RL: USES (Uses)  
(photoresist compns. contg. azidocyanostilbene deriv. and, for fine pattern formation)  
IT Semiconductor devices  
(photosensitive compns. contg. phenolic resin and azidocyanostilbene deriv. for fabrication of)  
IT Resists  
(photo-, contg. phenolic resin and azidocyanostilbene deriv. for fine pattern formation)  
IT 59269-51-1, Poly(Vinylphenol)  
RL: USES (Uses)  
(photoresist compns. contg. azidocyanostilbene deriv. and, for fine pattern formation)  
IT 23034-44-8 107000-06-6, 4-Azido-4'-(N-2-cyanoethyl-N-ethylamino)-.alpha.-cyanostilbene 107000-07-7  
RL: USES (Uses)  
(photoresist compns. contg. phenolic resin and, for fine pattern formation)

L19 ANSWER 29 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1987:93651 CAPLUS  
DOCUMENT NUMBER: 106:93651  
TITLE: Photoresist compositions  
INVENTOR(S): Adachi, Keiichi; Matsuda, Nobuaki  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND.	DATE	APPLICATION NO.	DATE
JP 61121050	A2	19860609	JP 1984-241764	19841116
PRIORITY APPLN. INFO.:			JP 1984-241764	19841116

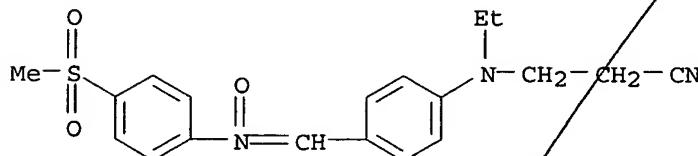
AB Photoresist compns. with good sensitivity and resoln. contain light absorbers with an absorption max. at 330-440 nm, and are discolored with light of the above wavelengths. Thus, HPR-204 (pos.-type photoresist contg. novolak and .gtoreq.1 o-quinone diazide; solids content 27.8%) was mixed with 1.1% Et<sub>2</sub>N-p-C<sub>6</sub>H<sub>4</sub>CH:N+PhO- to obtain a compn., which was coated on an Al-evapd. 4-in. Si wafer, prebaked 30 min at 90.degree. under N, patternwise exposed, and developed to show good sensitivity and resoln.

IT 105604-06-6 106776-23-2

RL: TEM (Technical or engineered material use); USES (Uses)  
(photoresist compn. contg., with improved sensitivity and  
resoln.)

RN 105604-06-6 CAPPLUS

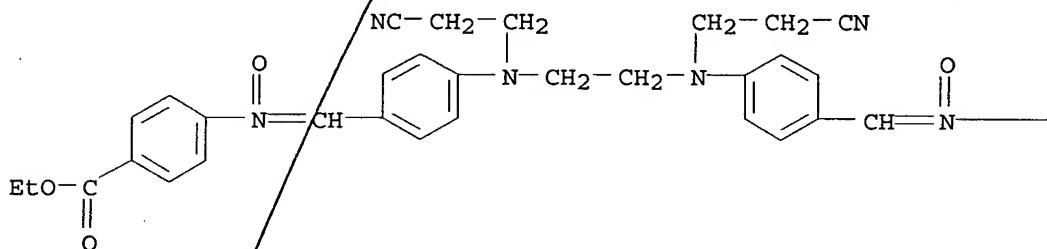
CN Propanenitrile, 3-[ethyl[4-[[4-(methylsulfonyl)phenyl]oxidoimino]methyl]p  
henyl]amino] - (9CI) (CA INDEX NAME)



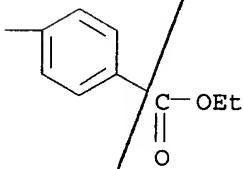
RN 106776-23-2 CAPPLUS

CN Benzoic acid, 4,4'-(1,2-ethanediylbis[[2-cyanoethyl]imino]-4,1-  
phenylene)bis-, diethyl ester (9CI) (CA INDEX  
NAME)

PAGE 1-A



PAGE 1-B



IC ICM G03C001-00

ICCS G03C005-00; G03F007-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)

ST photoresist compn sensitivity resoln; light absorber photoresist compn

IT Resists

(photo-, contg. light absorber for improved sensitivity and resoln.)

IT 93749-84-9 93749-88-3 93749-90-7 93749-91-8 105603-91-6

105603-92-7 105603-93-8 105603-94-9 105603-95-0 105603-96-1  
105603-97-2 105603-98-3 105603-99-4 105604-00-0 105604-01-1  
105604-02-2 105604-04-4 105604-05-5 105604-06-6  
105604-08-8 105604-09-9 105604-10-2 106776-22-1 106776-23-2  
106776-24-3

RL: TEM (Technical or engineered material use); USES (Uses)  
(photoresist compn. contg., with improved sensitivity and  
resoln.)

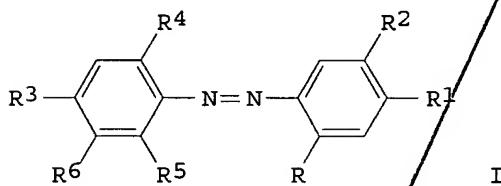
IT 84420-14-4, HPR-206

RL: USES (Uses)  
(photoresist contg. light absorber and, with improved sensitivity and  
resoln.)

L19 ANSWER 30 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1987:11211 CAPLUS  
DOCUMENT NUMBER: 106:11211  
TITLE: Photoresist compositions  
INVENTOR(S): Adachi, Keiichi  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61098344	A2	19860516	JP 1984-220146	19841019
PRIORITY APPLN. INFO.:			JP 1984-220146	19841019

GI



AB Photoresist compns. contain .gtoreq.1 compd. of the formula I (R = H, alkyl, acrylamino, sulfonylamino; R1 = dialkylamino; R2 = H, lower alkyl, lower alkoxy; R3, R4, R5, R6 = H, halo, alkyl, alkoxy, NO<sub>2</sub>, CN, ester, alkylsulfonyl, R1; R3 = R4 = R5 = R6 = NO<sub>2</sub>, halo, alkyl, and alkoxy when R = R2 = H and R1 = unsubstituted dialkylamino). The photoresist compns. provide high-resoln. resist patterns. Thus, pos.-working photoresist HPR-204 was added with I (R = NHCOCH<sub>2</sub>CHMe<sub>2</sub>; R1 = NETC<sub>2</sub>H<sub>4</sub>CN; R2 = R4 = R5 = R6 = H; R3 = Br), coated on an Al-coated Si wafer, prebaked at 90.degree. for 30 min/in a stream of N, patternwise exposed, and then developed to give high-quality resist patterns with high resoln.

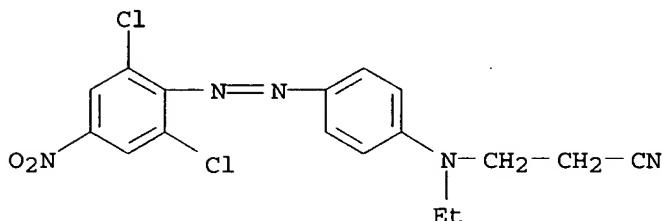
IT 13301-61-6 67923-43-7 99955-07-4  
105683-21-4 105683-22-5 105683-23-6  
105683-24-7 105683-25-8 105683-28-1  
105683-29-2 105683-30-5 105683-31-6  
105683-32-7 105683-36-1 105732-18-1

RL: USES (Uses)

(photoresists contg., for improved resoln.)

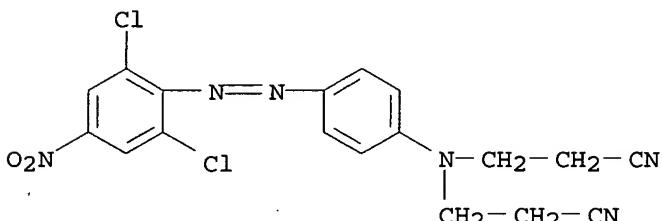
RN 13301-61-6 CAPPLUS

CN Propanenitrile, 3-[[4-[(2,6-dichloro-4-nitrophenyl)azo]phenyl]ethylamino] -  
(9CI) (CA INDEX NAME)



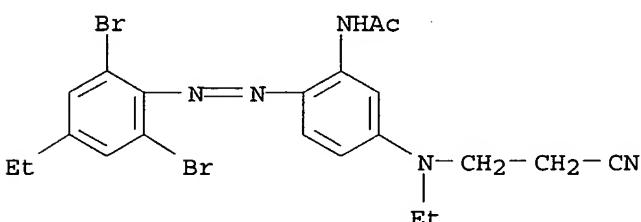
RN 67923-43-7 CAPPLUS

CN Propanenitrile, 3,3'-[[4-[(2,6-dichloro-4-nitrophenyl)azo]phenyl]imino]bis-  
(9CI) (CA INDEX NAME)



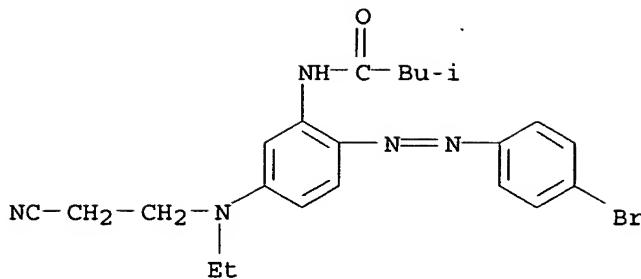
RN 99955-07-4 CAPPLUS

CN Acetamide, N-[5-[(2-cyanoethyl)ethylamino]-2-[(2,6-dibromo-4-ethylphenyl)azo]phenyl]- (9CI) (CA INDEX NAME)



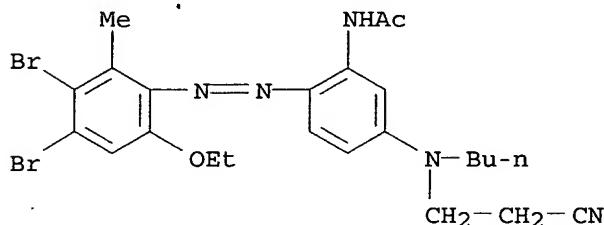
RN 105683-21-4 CAPPLUS

CN Butanamide, N-[2-[(4-bromophenyl)azo]-5-[(2-cyanoethyl)ethylamino]phenyl]-3-methyl- (9CI) (CA INDEX NAME)



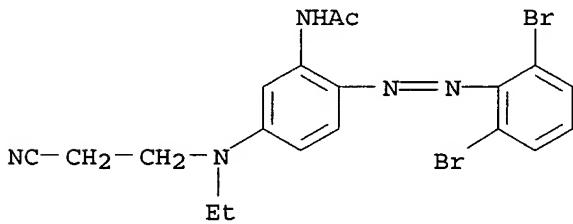
RN 105683-22-5 CAPLUS

CN Acetamide, N-[5-[butyl(2-cyanoethyl)amino]-2-[(3,4-dibromo-6-ethoxy-2-methylphenyl)azo]phenyl]- (9CI) (CA INDEX NAME)



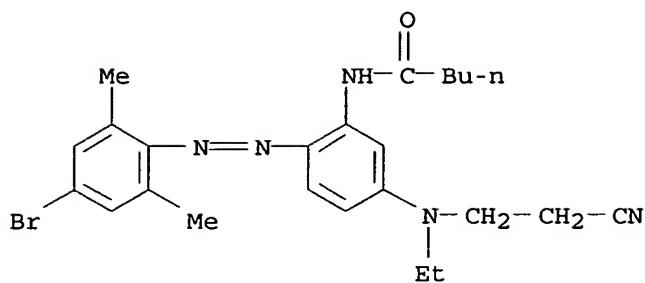
RN 105683-23-6 CAPLUS

CN Acetamide, N-[5-[(2-cyanoethyl)ethylamino]-2-[(2,6-dibromophenyl)azo]phenyl]- (9CI) (CA INDEX NAME)



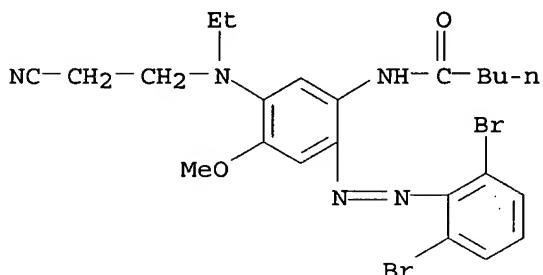
RN 105683-24-7 CAPLUS

CN Pentanamide, N-[2-[(4-bromo-2,6-dimethylphenyl)azo]-5-[(2-cyanoethyl)ethylamino]phenyl]- (9CI) (CA INDEX NAME)



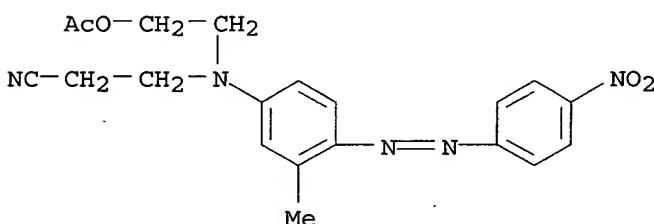
RN 105683-25-8 CAPLUS

CN Pentanamide, N-[5-[(2-cyanoethyl)ethylamino]-2-[(2,6-dibromophenyl)azo]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



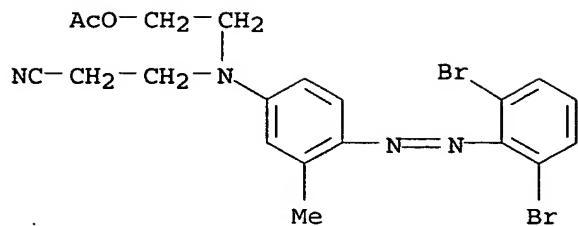
RN 105683-28-1 CAPLUS

CN Propanenitrile, 3-[[2-(acetyloxy)ethyl][3-methyl-4-[(4-nitrophenyl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)

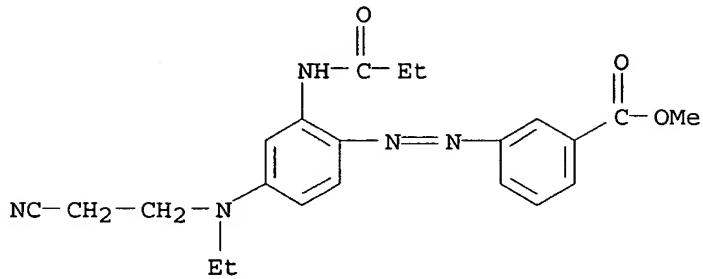


RN 105683-29-2 CAPLUS

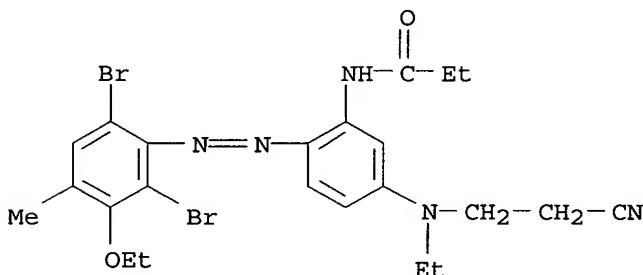
CN Propanenitrile, 3-[[2-(acetyloxy)ethyl][4-[(2,6-dibromophenyl)azo]-3-methylphenyl]amino]- (9CI) (CA INDEX NAME)



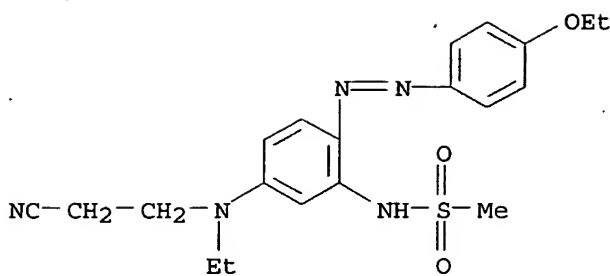
RN 105683-30-5 CAPLUS  
CN Benzoic acid, 3-[(4-[(2-cyanoethyl)ethylamino]-2-[(1-oxopropyl)amino]phenyl]azo]-, methyl ester (9CI) (CA INDEX NAME)



RN 105683-31-6 CAPLUS  
CN Propanamide, N-[(5-[(2-cyanoethyl)ethylamino]-2-[(2,6-dibromo-3-ethoxy-4-methylphenyl)azo]phenyl]- (9CI) (CA INDEX NAME)

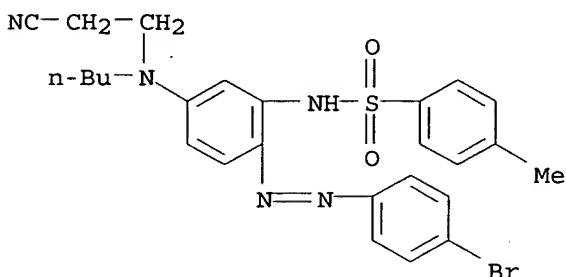


RN 105683-32-7 CAPLUS  
CN Methanesulfonamide, N-[(5-[(2-cyanoethyl)ethylamino]-2-[(4-ethoxyphenyl)azo]phenyl]- (9CI) (CA INDEX NAME)



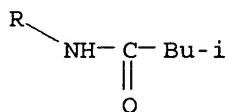
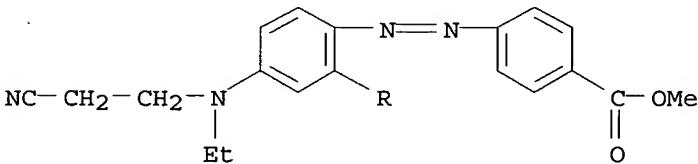
RN 105683-36-1 CAPLUS

CN Benzenesulfonamide, N-[2-[(4-bromophenyl)azo]-5-[butyl(2-cyanoethyl)amino]phenyl]-4-methyl- (9CI) (CA INDEX NAME)



RN 105732-18-1 CAPLUS

CN Benzoic acid, 4-[[4-[(2-cyanoethyl)ethylamino]-2-[(3-methyl-1-oxobutyl)amino]phenyl]azo]-, methyl ester (9CI) (CA INDEX NAME)



IC ICM G03C001-00

ICS C09B029-085

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST azobenzene deriv photoresist compn

IT Resists

(photo-, contg. azobenzene derivs. for improved resoln.)

IT 73928-57-1

RL: USES (Uses)

(photoresists contg. azobenzene derivs. and, for improved resoln.)

IT 3588-91-8 13301-61-6 32044-90-9 67923-43-7

99955-07-4 105683-21-4 105683-22-5

105683-23-6 105683-24-7 105683-25-8

105683-26-9 105683-27-0 105683-28-1 105683-29-2

105683-30-5 105683-31-6 105683-32-7

105683-33-8 105683-34-9 105683-35-0 105683-36-1

105683-37-2 105700-76-3 105732-18-1

RL: USES (Uses)

(photoresists contg., for improved resoln.)

L19 ANSWER 31 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1986:635868 CAPLUS

DOCUMENT NUMBER: 105:235868

TITLE: Photoresist material

INVENTOR(S): Adachi, Keiichi; Matsuda, Nobuaki

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61118741	A2	19860606	JP 1984-240289	19841114
PRIORITY APPLN. INFO.:			JP 1984-240289	19841114

AB A photoresist comprises an overcoat layer contg.  $[R_6(CR:CR_1)_nCR_2:N^-(O^-)R_{11}]_m$  (I;  $R_6 = R_3pZR_4$ ,  $R_5$ ;  $R_{11} = Z_1R_7q$ ;  $Z =$  halo, O, S, N;  $R_4 = C_6-13$  aryl;  $R_5 =$  heterocycl;  $Z_9 = C_6-20$  arylene;  $R_7 =$  halo, CN, R<sub>8</sub>, OR<sub>8</sub>, SR<sub>8</sub>, COR<sub>8</sub>, CO<sub>2</sub>R<sub>8</sub>, SO<sub>2</sub>R<sub>8</sub>, CONR<sub>9</sub>R<sub>10</sub>, SO<sub>2</sub>NR<sub>9</sub>R<sub>10</sub>, NR<sub>9</sub>COR<sub>8</sub>;  $R_8 =$  alkyl, aryl; R-R<sub>3</sub>, R<sub>9</sub>, R<sub>10</sub> = H, alkyl, aryl;  $m = 1, 2$ ;  $n, p, q = 0-2$ ). The material is resistant to prebaking and provides an image with high contrast. Thus, a pos. photoresist was overcoated with a binder and p-Et<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>N<sub>+(O^-)C\_6H\_4SO\_2Me-p</sub>. The resist gave images with resoln. up to 0.8  $\mu$ m and had good phys. strength.

IT 105604-06-6

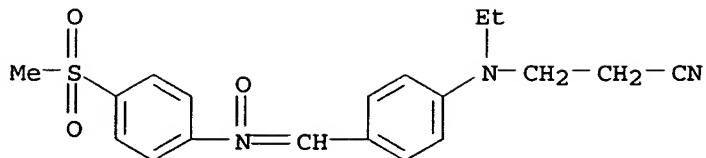
RL: USES (Uses)

(photoresists with overcoat layer contg., for improved resoln. and strength)

RN 105604-06-6 CAPLUS

CN Propanenitrile, 3-[ethyl[4-[[4-(methylsulfonyl)phenyl]oxidoimino]methyl]phenyl]amino]- (9CI) (CA INDEX NAME)





IC ICM G03C001-00  
ICS G03F007-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photoresist overcoat layer; resln enhancing additive photoresist  
IT Resists

(photo-, with overcoat layer contg. strength and resln. enhancing additive)

IT 105603-91-6 105603-92-7 105603-93-8 105603-94-9 105603-95-0  
105603-96-1 105603-97-2 105603-98-3 105603-99-4 105604-00-0  
105604-01-1 105604-02-2 105604-03-3 105604-04-4 105604-05-5  
105604-06-6 105604-07-7 105604-08-8 105604-09-9  
105604-10-2

RL: USES (Uses)

(photoresists with overcoat layer contg., for improved resln. and strength)

IT 100-65-2 120-21-8 22984-91-4 68727-15-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, for additive for photoresists)

L19 ANSWER 32 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1986:616698 CAPLUS

DOCUMENT NUMBER: 105:216698

TITLE: Novel photoresist compositions

INVENTOR(S): Adachi, Keiichi; Matsuda, Nobuaki

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

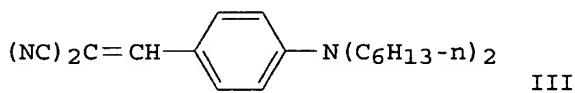
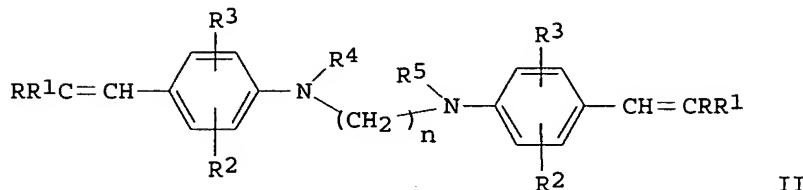
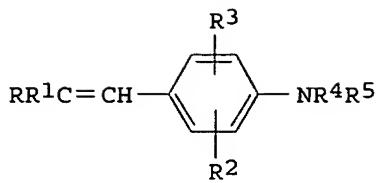
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61093445	A2	19860512	JP 1984-213956	19841012
JP 03069095	B4	19911030		

PRIORITY APPLN. INFO.: JP 1984-213956 19841012

GI



AB The title compns. contains .gtoreq.1 light-absorbing compd. of the general formula I or II (R, R<sub>1</sub> = electron-withdrawing moiety; R<sub>2</sub>, R<sub>3</sub> = H, halo, alkyl, alkoxy, amido; R<sub>4</sub>, R<sub>5</sub> = alkyl; R<sub>4</sub> and R<sub>5</sub> may be bound to form a 5- to 8-membered ring; n = 2-4). The compns. do not exhibit sublimation by prebaking at high temp. and are hence useful for fine pattern formation in fabricating integrated circuits. Thus, a Si wafer carrying an Al overlayer was spin-coated with a pos.-working photoresist (HPR-204) contg. III 1.2 wt.%, prebaked for 30 min at 90.degree., patternwise exposed to light, and developed with a developer (Pos. LSI Developer Metal Ion Free) to give a sharp pattern with a resoln. of 0.8 .mu.m.

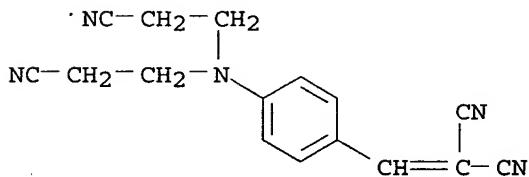
IT 37401-05-1 105394-58-9

### RL: USES (Uses)

(pos. photoresist compns. contg., as light-absorbing agent for halation suppression)

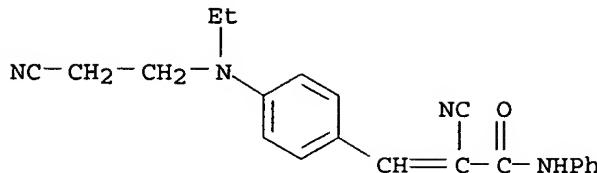
RN 37401-05-1 CAPLUS

CN Propanedinitrile, [[4-[bis(2-cyanoethyl)amino]phenyl]methylene]- (9CI)  
(CA INDEX NAME)



RN 105394-58-9 CAPLUS

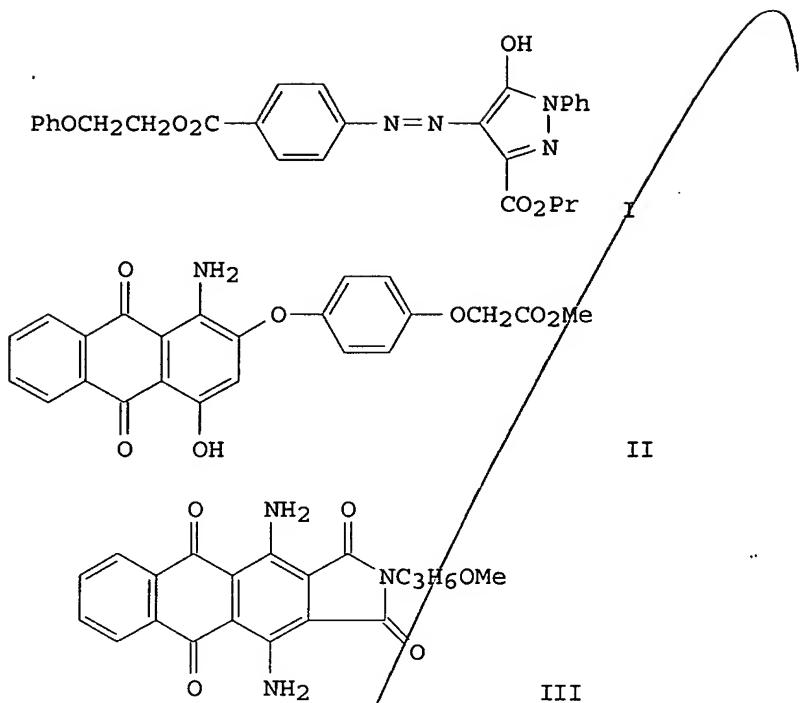
CN 2-Propenamide, 2-cyano-3-[(4-[(2-cyanoethyl)ethylamino]phenyl)-N-phenyl- (9CI) (CA INDEX NAME)



IC ICM G03C001-00  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 76  
ST light absorbing vinylaniline pos photoresist; halation suppression vinylaniline pos photoresist  
IT Electric circuits  
    (integrated, pos. resists contg. vinylaniline deriv.  
    halation-suppressing agents for fabrication of)  
IT Resists  
    (photo-, pos., contg. vinylaniline deriv. light-absorbing agents for halation suppression)  
IT 73928-57-1  
RL: USES (Uses)  
    (photoresist compns. contg. vinylaniline deriv. light-absorbing agent and, for fabrication of integrated elec. circuits)  
IT 1886-52-8 20413-08-5 37401-05-1 63619-32-9 72758-33-9  
81729-01-3 95966-26-0 102348-86-7 105394-58-9 105394-59-0  
105394-60-3 105394-61-4 105426-98-0  
RL: USES (Uses)  
    (pos. photoresist compns. contg., as light-absorbing agent for halation suppression)

L19 ANSWER 33 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1986:554610 CAPLUS  
DOCUMENT NUMBER: 105:154610  
TITLE: Alkali-discharge-resist dyeing compositions for  
polyester fibers  
INVENTOR(S): Himeno, Kiyoshi; Fujita, Takashi; Yoshihara, Junji;  
Sanaki, Ken  
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61041382	A2	19860227	JP 1984-157045	19840727
PRIORITY APPLN. INFO.:			JP 1984-157045	19840727
GI				



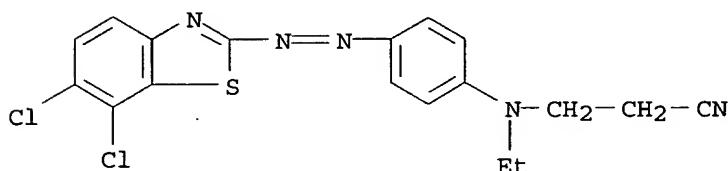
AB The title compns. producing multicolor dyeings with sharp pattern borders comprise an alkali-decomposable disperse dye compn., a saponifiable disperse dye compn. contg. an alkali, and an alkali-resistant disperse dye compn. contg. an alkali. Thus, alkali-decomposable yellow I 1.0, naphthalenesulfonic acid-HCHO condensate 2.0, and higher alc. sulfate 1.0 g were dispersed in 20 mL water, and this dispersion 20, 5% aq. Na alginate 55, citric acid 1, and water 24 g were mixed to give dispersion A. A dispersion was prep'd. similarly using saponifiable red II in place of I, and the resulting dispersion 5, CM-cellulose thickener 30, Na<sub>2</sub>CO<sub>3</sub> 3, a polyethylene glycol-based solubilizer 10, a carrier 2, and water 50 g were mixed to give dispersion B. A dispersion was prep'd. similarly using alkali-resistant turquoise III in place of I, and the resulting dispersion 5, CM-cellulose thickener 30, Na<sub>2</sub>CO<sub>3</sub> 15, solubilizer 15, carrier 2, and water 33 g were mixed to give dispersion C. A polyester fabric was impregnated with the dispersion A, dried at 100.degree. for 2 min, printed in a longitudinal stripe pattern with the dispersion C, dried at 100.degree., printed in a transverse stripe pattern with the dispersion B, dried at 100.degree., and steamed at 175.degree. for 7 min, followed by usual washing, redn. clearing, and drying to give a light- and wetfast dyeing with a grid pattern of turquoise longitudinal stripes and red transverse stripes in yellow background. The stripe overlap area was red-free turquoise, and the border between stripes was very sharp without color bleeding.

IT 25150-28-1 25176-89-0 28080-91-3  
28824-41-1 28824-43-3 61852-41-3  
88779-56-0 104573-11-7 104573-46-8  
104573-47-9 104573-50-4 104573-53-7  
104573-62-8

RL: PEP (Physical, engineering or chemical process); TEM (Technical or  
engineered material use); PROC (Process); USES (Uses)  
(dye, in alkali-discharge-resist dye compns., for dyeing  
polyester fabrics in multicolor patterns)

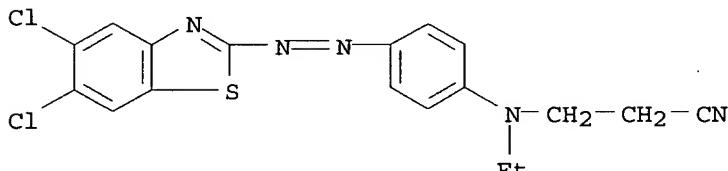
RN 25150-28-1 CAPPLUS

CN Propanenitrile, 3-[[4-[(6,7-dichloro-2-benzothiazolyl)azo]phenyl]ethylamino  
o]- (9CI) (CA INDEX NAME)



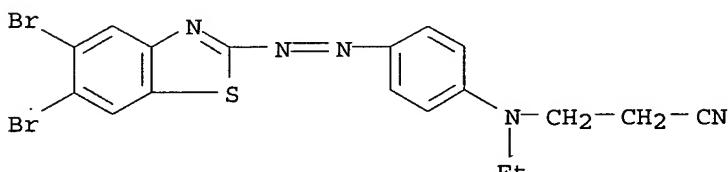
RN 25176-89-0 CAPPLUS

CN Propanenitrile, 3-[[4-[(5,6-dichloro-2-benzothiazolyl)azo]phenyl]ethylamino  
o]- (9CI) (CA INDEX NAME)



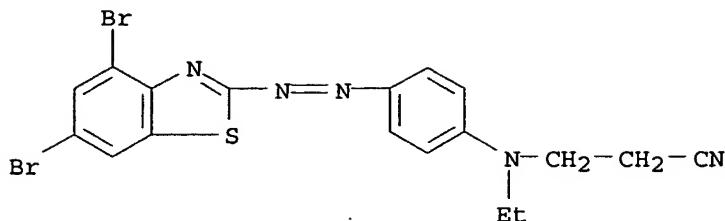
RN 28080-91-3 CAPPLUS

CN Propanenitrile, 3-[[4-[(5,6-dibromo-2-benzothiazolyl)azo]phenyl]ethylamino  
o]- (9CI) (CA INDEX NAME)

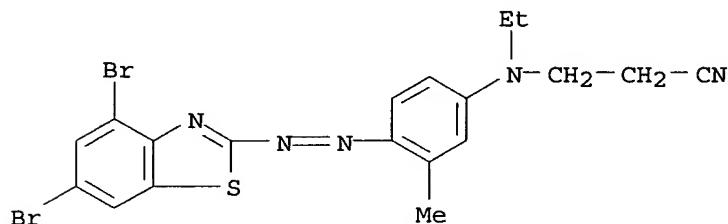


RN 28824-41-1 CAPPLUS

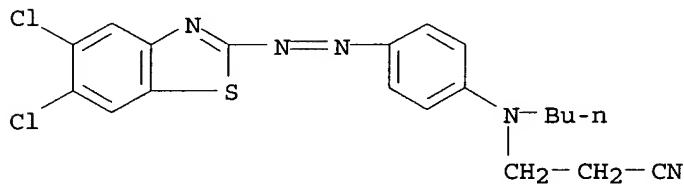
CN Propanenitrile, 3-[[4-[(4,6-dibromo-2-benzothiazolyl)azo]phenyl]ethylamino  
o]- (9CI) (CA INDEX NAME)



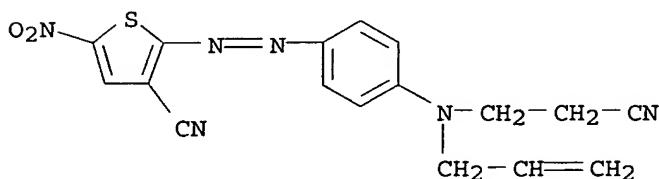
RN 28824-43-3 CAPLUS  
CN Propanenitrile, 3-[(4,6-dibromo-2-benzothiazolyl)azo]-3-methylphenyl ethylamino- (9CI) (CA INDEX NAME)



RN 61852-41-3 CAPLUS  
CN Propanenitrile, 3-[(butyl[4-[(5,6-dichloro-2-benzothiazolyl)azo]phenyl]amino)acetonitrile (9CI) (CA INDEX NAME)

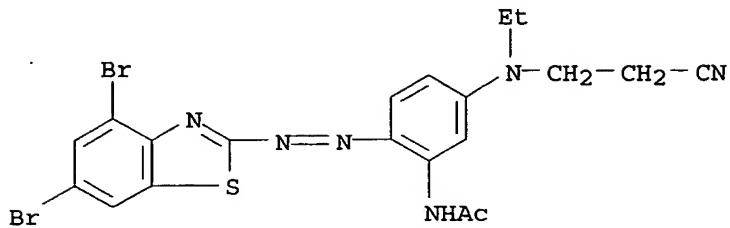


RN 88779-56-0 CAPLUS  
CN 3-Thiophenecarbonitrile, 2-[(4-[(2-cyanoethyl)-2-propenylamino]phenyl]azo]-5-nitro- (9CI) (CA INDEX NAME)



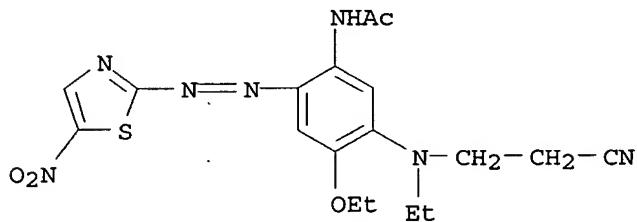
RN 104573-11-7 CAPLUS  
CN Acetamide, N-[(5-[(2-cyanoethyl)ethylamino]-2-[(4,6-dibromo-2-

benzothiazolyl)azo]phenyl] - (9CI) (CA INDEX NAME)



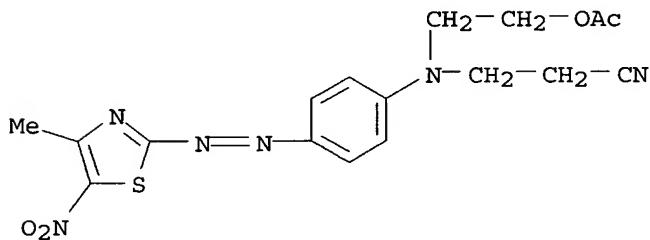
RN 104573-46-8 CAPLUS

CN Acetamide, N-[5-[(2-cyanoethyl)ethylamino]-4-ethoxy-2-[(5-nitro-2-thiazolyl)azo]phenyl] - (9CI) (CA INDEX NAME)



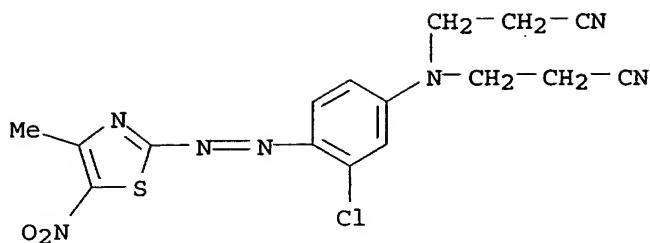
RN 104573-47-9 CAPLUS

CN Propanenitrile, 3-[[2-(acetoxyethyl)ethyl][4-[(4-methyl-5-nitro-2-thiazolyl)azo]phenyl]amino] - (9CI) (CA INDEX NAME)

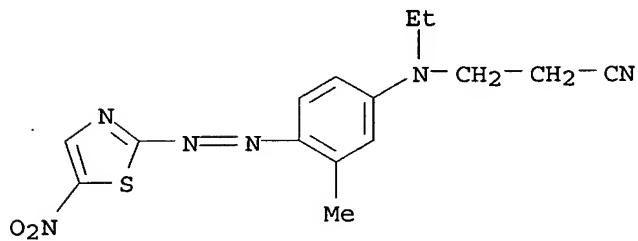


RN 104573-50-4 CAPLUS

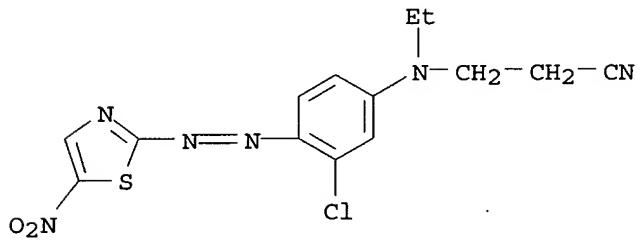
CN Propanenitrile, 3,3'-[[3-chloro-4-[(4-methyl-5-nitro-2-thiazolyl)azo]phenyl]imino]bis- - (9CI) (CA INDEX NAME)



RN 104573-53-7 CAPLUS  
CN Propanenitrile, 3-[ethyl[3-methyl-4-[(5-nitro-2-thiazolyl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)



RN 104573-62-8 CAPLUS  
CN Propanenitrile, 3-[[3-chloro-4-[(5-nitro-2-thiazolyl)azo]phenyl]ethylamino]- (9CI) (CA INDEX NAME)



IC ICM D06P005-12  
CC 40-6 (Textiles)  
Section cross-reference(s): 41  
ST dyeing polyester fabric multicolor; alkali discharge dyeing polyester fabric; resist dyeing polyester fabric; azo dye polyester fiber; anthraquinone dye polyester fiber  
IT Dyes, anthraquinone  
Dyes, azo  
(in alkali-discharge-resist dye compns., for dyeing polyester fibers in multicolor patterns)  
IT Polyester fibers, uses and miscellaneous

## RL: USES (Uses)

(printing on, alkali discharge-resist, in multicolor patterns)

IT Textile printing  
 (discharge, resist, alkali, on polyester fabrics in multicolor patterns)

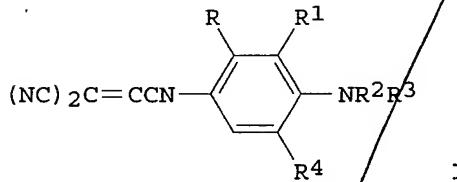
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	13716-91-1	16421-14-0	16472-04-1	17869-07-7	17869-09-9	
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	42757-85-7	42783-06-2	42988-08-9	49744-25-4	49744-26-5	
	49744-42-5	52236-82-5	53773-30-1	54243-60-6	56827-97-5	
	56932-69-5	58622-70-1	58979-46-7	60462-90-0	61038-97-9	
	61355-92-8	61852-41-3	62072-81-5	62592-03-4	65121-70-2	
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	73275-66-8	75125-55-2	75511-86-3	77486-75-0	77911-27-4	
	79044-52-3	79044-55-6	79926-28-6	80432-88-8	80432-93-5	
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	104573-55-9	104573-56-0	104573-57-1	104573-58-2	104573-59-3	

104573-60-6 104573-61-7 104573-62-8 104595-72-4  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or  
engineered material use); PROC (Process); USES (Uses)  
(dye, in alkali-discharge-resist dye compns., for dyeing  
polyester fabrics in multicolor patterns)

L19 ANSWER 34 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1986:150738 CAPLUS  
DOCUMENT NUMBER: 104:150738  
TITLE: Tricyanovinyl dyes for alkali discharge and resist  
printing  
INVENTOR(S): Niwa, Toshio; Murata, Jukichi; Maeda, Shuichi  
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60194189	A2	19851002	JP 1984-43069	19840307
PRIORITY APPLN. INFO.:			JP 1984-43069	19840307

GI



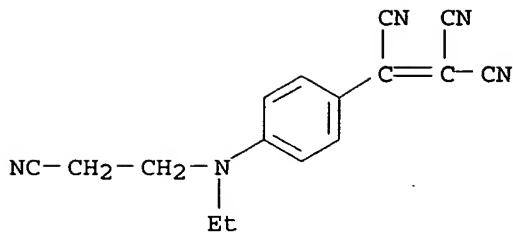
AB Title dyes I [R = H, Me, Cl; R1 = H, Me, Cl, NO<sub>2</sub>; R2, R3 = H, (substituted) alkyl, aryl, alkenyl, cyclohexyl; R1 = H, Me; R and R1 may be bonded to form benzene or pyridine ring; R1 and R2, R3 and R4 may be bonded to form N-contg. 6-membered ring] are useful for alkali discharge or resist printing of polyester fibers. Thus, a polyester fabric was padded in a dye bath contg. I (R = R1 = R4 = H; R2 = Et; R3 = C<sub>2</sub>H<sub>4</sub>NHCONHPh), squeezed, dried, overprinted with a paste contg. Na<sub>2</sub>CO<sub>3</sub>, fixed by steaming, redn. cleared, soaped, rinsed, and dried to give a fabric with red printings showing excellent fastness to light, sublimation, water, and washing.

IT 81430-43-5

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(discharge and resist printing with, of polyester fibers)

RN 81430-43-5 CAPLUS

CN Ethenetricarbonitrile, [4-[(2-cyanoethyl)ethylamino]phenyl]- (9CI) (CA  
INDEX NAME)



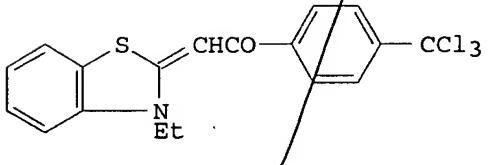
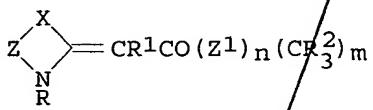
IC ICM D06P005-12  
 ICS C09B023-00  
 CC 40-6 (Textiles)  
 ST alkali printing polyester fiber; tricyanovinyl dye polyester fiber;  
 cyanovinyl dye polyester fiber; discharge printing polyester fiber dye;  
 resist printing polyester fiber dye  
 IT Polyester fibers, uses and miscellaneous  
 RL: USES (Uses)  
 (discharge and resist printing on, with tricyanovinyl aniline derivs.)  
 IT Textile printing  
 (discharge, on polyester fibers, with tricyanovinyl aniline derivs.)  
 IT Textile printing  
 (resist, on polyester fibers, with tricyanovinyl aniline derivs.)  
 IT 6673-15-0 24789-99-9 28191-30-2 58293-57-5 63504-26-7 64672-71-5  
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 101390-70-9 101390-71-0 101390-72-1 101390-73-2 101390-74-3  
 101390-75-4 101390-76-5 101390-77-6 101390-78-7 101390-79-8  
 101390-80-1 101390-81-2 101390-82-3 101390-83-4 101390-84-5  
 101390-85-6 101390-86-7 101390-87-8 101390-88-9 101409-50-1  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (discharge and resist printing with, of polyester fibers)

ACCESSION NUMBER: 1985:569903 CAPLUS  
DOCUMENT NUMBER: 103:169903  
TITLE: Trihalomethyl group-containing carbonylmethyl heterocycles and photosensitive mixtures containing them  
INVENTOR(S): Doenges, Reinhard; Ruckert, Hans; Geissler, Ulrich; Steppan, Hartmut  
PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.  
SOURCE: Ger. Offen., 46 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3333450	A1	19850411	DE 1983-3333450	19830916
EP 135863	A2	19850403	EP 1984-110533	19840905
EP 135863	A3	19850515		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
ZA 8407165	A	19850424	ZA 1984-7165	19840912
FI 8403594	A	19850317	FI 1984-3594	19840913
FI 81786	B	19900831		
FI 81786	C	19901210		
US 4966828	A	19901030	US 1984-651116	19840913
AU 8433067	A1	19850321	AU 1984-33067	19840914
HU 37134	O	19851128	HU 1984-3474	19840914
HU 193590	B	19871028		
ES 535956	A1	19851201	ES 1984-535956	19840914
CS 253715	B2	19871217	CS 1984-6926	19840914
IL 72945	A1	19890515	IL 1984-72945	19840914
JP 60089473	A2	19850520	JP 1984-192770	19840917
PRIORITY APPN. INFO.			DE 1983-3333450	19830916

PRIORITY APPN: INFO..

G1



AB Trihalomethyl group-contg. carbonylmethylene heterocycles (I; R = alkyl, aralkyl, or alkoxyalkyl; R1 = H or CO(Z)nC(R2)3; R2 = Cl, Br, or I; Z = alkylene, alkenylene, or arylene; Z1 = a divalent arom. group; X = S, Se,

O, dialkylmethylene, alken-1,2-ylene, 1,2-phenylenes, or NR; m = 1 or 2; n = 0 or 1), which upon exposure to light form HX and radicals, are used as photoinitiators in photosensitive compns. for use as photoresists, in the prodn. of printing plates and the like. Thus, a mech. grained Al plate was coated with a compn. contg. II 0.5, a polyacetal of triethylene glycol and 2-ethylbutyraldehyde 23.75, a cresol-HCHO novolak resin 75.0, 2-ethoxyethanol 24.25, and MeCOEt 375 parts, dried at 100.degree., step wedge exposed for 2 min, and developed with an aq. soln. to give 7 steps.

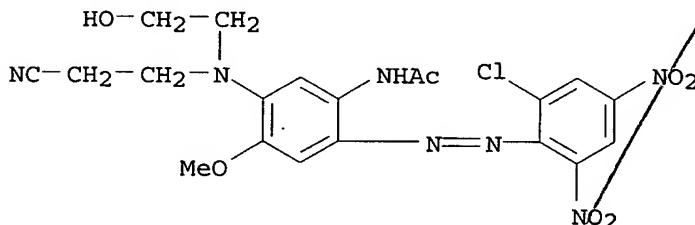
IT 23807-28-5

RL: USES (Uses)

(photosensitive compns. contg. trihalomethyl group-contg. carbonylmethylene heterocycle photoinitiator and, for photoresists and printing plates)

RN 23807-28-5 CAPLUS

CN Acetamide, N-[2-[(2-chloro-4,6-dinitrophenyl)azo]-5-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



IC ICM C07D277-64

ICS C07D277-84; C07D209-10; C07D417-06; C07D413-06; C07D401-06; C07D403-06; C08F002-50; G03C001-72; G03C001-68; G03F007-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST trihalomethylcarbonylmethyl heterocycle photoinitiator photoresist; printing plate photosensitive trihalomethylcarbonylmethylheterocycle

IT Photoimaging compositions and processes

(contg. monomers, copolymers, and trihalomethyl group-contg. carbonylmethylene heterocycle photoinitiator)

IT Lithographic plates

Printing plates

(photosensitive compns. contg. monomers, copolymers, and trihalomethyl group-contg. carbonylmethylene heterocycle photoinitiator for prepn. of)

IT Urethane polymers, uses and miscellaneous

RL: USES (Uses)

(photosensitive compns. contg. trihalomethyl group-contg. carbonylmethylene heterocycle photoinitiator and, for photoresists and printing plates)

IT Resists

(photo-, trihalomethyl group-contg. carbonylmethyleneheterocycle photoinitiators for)

IT 97189-81-6 97189-88-3 97189-89-4 97189-93-0 98707-12-1  
98707-13-2 98707-15-4 98707-16-5 98707-17-6 98707-19-8

98707-20-1 98707-21-2

RL: USES (Uses)

(photosensitive compns. contg. phenolic resins, copolymers and, for photoresists and printing plate prepns.)

IT 97-96-1D, acetal with 1,6-hexanediol 97-96-1D, acetal with triethylene glycol 110-80-5 112-27-6D, acetal with 2-ethyl-butyraldehyde 467-63-0 569-64-2 603-48-5 629-11-8D, acetal with 2-ethyl-butyraldehyde 9003-32-1 9016-83-5 15625-89-5 23807-28-5 25086-15-1 25721-76-0 28262-63-7 29570-58-9 41137-60-4 58601-54-0 60466-57-1 73539-63-6 81119-32-6 98726-98-8

RL: USES (Uses)

(photosensitive compns. contg. trihalomethyl group-contg. carbonylmethylene heterocycle photoinitiator and, for photoresists and printing plates)

IT 118-12-7P 1042-84-8P 2654-52-6P 6734-20-9P 14933-76-7P 58480-17-4P 63149-07-5P 98707-14-3P 98707-18-7P 98707-23-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

IT 118-12-7

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of)

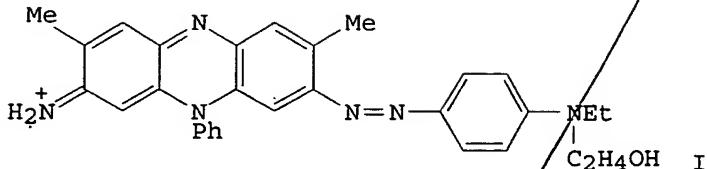
L19 ANSWER 36 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1985:430297 CAPLUS  
DOCUMENT NUMBER: 103:30297  
TITLE: Radiation-sensitive compositions  
INVENTOR(S): Folkard, Christopher Walter; Millross, Christopher Robert  
PATENT ASSIGNEE(S): Vickers PLC, UK  
SOURCE: Eur. Pat. Appl., 30 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 127477	A2	19841205	EP 1984-303588	19840529
EP 127477	A3	19861001		
EP 127477	B1	19921119		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
US 4687728	A	19870818	US 1984-614993	19840529
AT 82643	E	19921215	AT 1984-303588	19840529
FI 8402176	A	19841201	FI 1984-2176	19840530
FI 78992	B	19890630		
FI 78992	C	19891010		
DK 8402696	A	19841201	DK 1984-2696	19840530
NO 8402188	A	19841203	NO 1984-2188	19840530
AU 8428849	A1	19841206	AU 1984-28849	19840530
AU 576764	B2	19880908		

CA 1253728	A1 19890509	CA 1984-455477	19840530
ES 533027	A1 19851216	ES 1984-533027	19840531
PRIORITY APPLN. INFO.:		GB 1983-14918	19830531
		EP 1984-303588	19840529

GI



AB A photosensitive compn. useful for lithog. plate prodn. and as a photoresist contains a dye which undergoes a color change at temp.  $\geq 180^{\circ}\text{C}$  to assure proper baking of the produced image. Thus, an electrolytically grained, anodized Al support was coated with a compn. contg. epoxy resin ester of 4-azido-.alpha.-cyano-.delta.-chlorocinnamylideneacetic acid 3, 1,2-benzoanthraquinone 0.3, I 0.3%, and EtCOMe, dried at  $65^{\circ}\text{C}$  for 5 min, imagewise exposed, and developed with a solvent to give a lithog. plate having a green image which was treated with a Na dodecylphenoxybenzenedisulfonate soln. and baked for 10 min at  $200^{\circ}\text{C}$  to give a red/brown image.

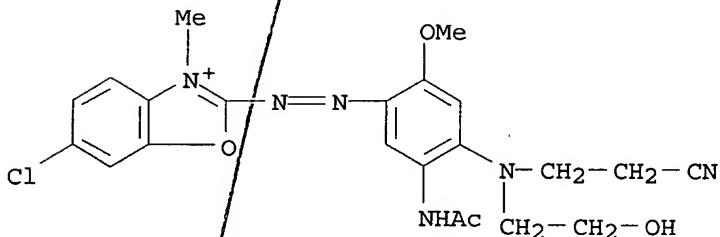
IT 97065-38-8 97065-49-1

RL: USES (Uses)

(photoimaging compn. for lithog. plate and photoresist prodn. contg., for color change during baking of produced images)

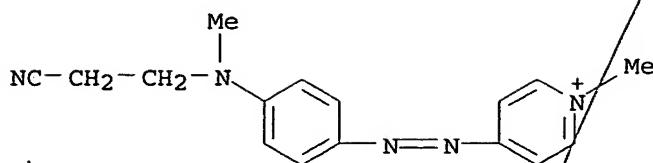
RN 97065-38-8 CAPLUS

CN Benzoxazolium, 2-[[5-(acetylamino)-4-[(2-cyanoethyl)(2-hydroxyethyl)amino]-2-methoxyphenyl]azo]-6-chloro-3-methyl- (9CI) (CA INDEX NAME)



RN 97065-49-1 CAPLUS

CN Pyridinium, 4-[[4-[(2-cyanoethyl)methylamino]phenyl]azo]-1-methyl- (9CI) (CA INDEX NAME)



IC G03F007-02; G03F007-26  
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST lithog plate photosensitive compn dye; photoresist heat sensitive dye  
IT Epoxy resins, uses and miscellaneous  
RL: USES (Uses)  
(azidocyanochlorocinnamylideneacetic acid ester, photosensitive compn. for lithog. plates and photoresists contg., introduction of heat-sensitive dye to, for control of baking of obtained images)  
IT Lithographic plates  
(photosensitive compn. for prepn. of, contg. heat-sensitive dye, for control of baking conditions of obtained images)  
IT Resists  
(photo-, introduction of heat-sensitive dye into, for control of baking of obtained images)  
IT 81-77-6 842-07-9 2869-83-2 3521-06-0 38901-82-5 47083-49-8  
61725-69-7 63404-49-9 66104-65-2 97065-34-4 97065-35-5  
97065-36-6 97065-37-7 97065-38-8 97065-39-9 97065-40-2  
97065-41-3 97065-42-4 97065-43-5 97065-44-6 97065-45-7  
97065-46-8 97065-47-9 97065-48-0 97065-49-1 97065-50-4  
97090-45-4 97090-46-5 97090-47-6  
RL: USES (Uses)  
(photoimaging compn. for lithog. plate and photoresist prodn. contg., for color change during baking of produced images)  
IT 879-15-2D, sulfonic esters  
RL: USES (Uses)  
(photosensitive imaging compn. for lithog. plate fabrication and photoresists contg., introduction of heat-sensitive dye to, for control of baking of obtained images)  
IT 2367-19-3 2498-66-0 28110-26-1 69432-40-2 80638-50-2  
97065-51-5D, esters with epoxy polymers  
RL: USES (Uses)  
(photosensitive imaging compn. for printing plate and photoresist fabrication contg., addn. of heat-sensitive dye to, for control of baking conditions of obtained images)  
IT 1321-69-3D, alkyl derivs. 25155-30-0 26545-58-4 28519-02-0  
RL: USES (Uses)  
(processing soln. contg., for treating of images produced from photosensitive compn. contg. heat-sensitive dye for lithog. plate prepns.)

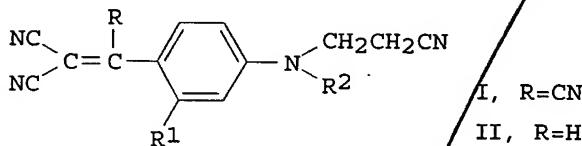
L19 ANSWER 37 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1984:631940 CAPLUS

DOCUMENT NUMBER: 101:231940

TITLE: Tricyanostyryl dyes  
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59126466	A2	19840721	JP 1983-2605	19830110
JP 03063995	B4	19911003		
PRIORITY APPLN. INFO.:			JP 1983-2605	19830110
GI				



AB The lightfast title dyes I (R1 = H, lower alkyl, alkoxy, halogen; R2 = (un)substituted C<sub>1</sub>-C<sub>5</sub> alkyl, cycloalkyl) were prep'd. and used for dyeing and direct and resist printing of polyester fibers and polyester-cotton blends and for coloring plastics in scarlet to bluish red shades. Thus, II (R1 = H; R2 = n-C<sub>5</sub>H<sub>11</sub>) [93090-82-5] in DMF was treated with NaCN and then Br to give scarlet I (R1 = H; R2 = n-C<sub>5</sub>H<sub>11</sub>) [93090-81-4].  
 IC C09B023-14  
 CC 41-6 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
 ST cyanostyryl dye; styryl tricyano dye; cotton polyester blend dye; polyester fiber dye; thermoplastic resin dye  
 IT Polyester fibers, uses and miscellaneous  
 RL: USES (Uses)  
     (dyes for, tricyanostyryl)  
 IT Textile printing  
     (of polyester fibers and polyester-cotton blends, tricyanostyryl dyes for)  
 IT Dyes  
     (tricyanostyryl, for polyester fibers and plastics)  
 IT 93090-80-3 93090-82-5  
     RL: RCT (Reactant); RACT (Reactant or reagent)  
     (cyanation of)  
 IT 93090-77-8 93090-78-9 93090-81-4  
     RL: USES (Uses)  
     (dye, for polyester fibers and thermoplastics)  
 IT 9003-56-9

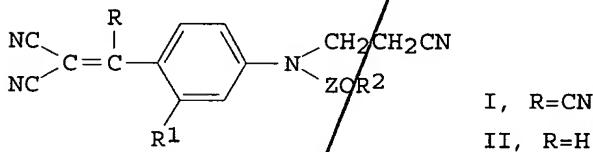
RL: USES (Uses)  
(dyes for, tricyanostyryl compd. as)  
IT 25038-59-9, uses and miscellaneous  
RL: USES (Uses)  
(dyes for, tricyanostyryl compds. as)  
IT 93090-79-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with tetracyanoethylene)  
IT 670-54-2, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with toluidine derivs.)

L19 ANSWER 38 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1984:612672 CAPLUS  
DOCUMENT NUMBER: 101:212672  
TITLE: Tricyanostyryl dyes  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59129263	A2	19840725	JP 1983-3793	19830112
JP 04005698	B4	19920203		

PRIORITY APPLN. INFO.: GI



AB The lightfast title dyes I (R1 = H, alkyl, alkoxy, halogen; R2= (un)substituted phenyl; Z = C2-10 alkylene) were prep'd. and used for dyeing and direct and resist printing of polyester fibers and polyester-cotton blends and for coloring of plastics in scarlet to bluish red shades. Thus, II (R1 = H; R2 = Ph; Z = hexamethylene) [ 93090-76-7] in DMF was treated with NaCN and then Br to give greenish dark red I (R1 = H; R2 = Ph; Z = hexamethylene) [ 93090-75-6].

IC C09B023-14

CC 41-6 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

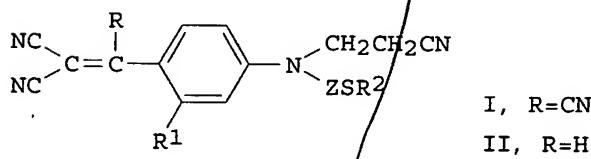
ST cyanostyryl dye; styryl tricyano dye; cotton polyester blend dye;

• Page 98Lee288

• polyester fiber dye; thermoplastic resin dye  
IT Polyester fibers, uses and miscellaneous  
RL: USES (Uses)  
(dyes for, tricyanostyryl)  
IT Textile printing  
(of polyester fibers and polyester-cotton blends, tricyanostyryl dyes  
for)  
IT Dyes  
(tricyanostyryl, for polyester fibers and thermoplastics)  
IT 93090-74-5 93090-76-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyanation of)  
IT 93090-71-2 93090-72-3 93090-75-6  
RL: USES (Uses)  
(dye, for polyester fibers and thermoplastics)  
IT 9003-56-9 25038-59-9, uses and miscellaneous  
RL: USES (Uses)  
(dyes for, tricyanostyryl compds. as)  
IT 93090-73-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with tetracyanoethylene)  
IT 670-54-2, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with toluidine derivs.)

L19 ANSWER 39 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1984:612671 CAPLUS  
DOCUMENT NUMBER: 101:212671  
TITLE: Tricyanostyryl dyes  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59129264	A2	19840725	JP 1983-3795	19830112
JP 03063996	B4	19911003		
PRIORITY APPLN. INFO.:			JP 1983-3795	19830112
GI				



AB The lightfast title dyes I (R1 = H, alkyl, alkoxy, halogen; R2 = (un)substituted benzimidazolyl, benzoxazolyl, benzothiazolyl; Z = Cl-10 alkylene) were prep'd. and used for dyeing and direct and **resist** printing of polyester fibers and polyester-cotton blends and for coloring plastics in reddish orange to bluish red shades. Thus, II (R1 = H; R2 = 2-benzothiazolyl; Z = hexamethylene) [93090-70-1] in DMF was treated with NaCN and then Br to give yellowish scarlet I (R1 = H; R2 = 2-benzothiazolyl; Z = hexamethylene) [93090-69-8].

IC C09B023-14

CC 41-6 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

ST cyanostyryl dye; styryl tricyano dye; cotton polyester blend dye; polyester fiber dye; thermoplastic resin dye

IT Polyester fibers, uses and miscellaneous

RL: USES (Uses)  
(dyes for, tricyanostyryl)

IT Textile printing  
(of polyester fibers and polyester-cotton blends, tricyanostyryl dyes for)

IT Dyes  
(tricyanostyryl, for fibers and plastics)

IT 93090-66-5 93090-70-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyanation of)

IT 93090-65-4 93090-67-6 93090-69-8  
RL: USES (Uses)  
(dye, for polyester fibers and plastics)

IT 9003-56-9 25038-59-9, uses and miscellaneous  
RL: USES (Uses)  
(dyes for, tricyanostyryl derivs. as)

IT 93090-68-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with tetracyanoethylene)

IT 670-54-2, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with toluidine derivs.)

L19 ANSWER 40 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1984:561262 CAPLUS  
DOCUMENT NUMBER: 101:161262  
TITLE: Photosensitive layer transfer material and its use in  
producing a photoresist pattern  
INVENTOR(S): Geissler, Ulrich; Herwig, Walter; Sikora, Helga  
PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.  
SOURCE: Ger. Offen., 25 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3236560	A1	19840405	DE 1982-3236560	19821002
JP 59075245	A2	19840427	JP 1983-168533	19830914
JP 06012413	B4	19940216		
EP 105421	A1	19840418	EP 1983-109447	19830922
EP 105421	B1	19880608		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
AT 35060	E	19880615	AT 1983-109447	19830922
FI 8303517	A	19840403	FI 1983-3517	19830929
FI 74156	B	19870831		
FI 74156	C	19871210		
ES 526181	A1	19841116	ES 1983-526181	19830930
IL 69876	A1	19870227	IL 1983-69876	19830930
AU 558773	B2	19870205	AU 1983-19862	19831004
PRIORITY APPLN. INFO.:				
			DE 1982-3236560	19821002
			EP 1983-109447	19830922

AB Photosensitive transfer materials for the prodn. of photoresist patterns and solder masks are composed of a flexible transparent temporary support with a high surface roughness, a photosensitive layer, and, if necessary, a top layer and an interlayer between the temporary support and the photosensitive layer. The roughened surface of the temporary support causes the surface layer of the interlayer or the photosensitive to be deformed which results in decreased troublesome reflections and elimination of swelling irregularities caused by atm. moisture. Thus, a poly(ethylene terephthalate) film contg. 1 .mu.m SiO<sub>2</sub> particles was coated with a resist compn. contg. hexyl methacrylate-methacrylic acid-styrene copolymer 13, polyethylene glycol dimethacrylate 4.4, an elastomeric reaction product from adipic acid, glycidyl methacrylate, and an oligomeric diisocyanate 1.6, hexamethoxymethylmelamine 1, 9-phenylacridine 0.2, a blue azo dye 0.01, 1,4-bis(4-tert-butoxyphenylamino)-5,8-dihydroxyanthraquinone 0.03, butanone 30, and EtOH 5.0 g to give a 100 .mu.m (dry) resist layer and covered with a polypropylene film. This material was then laminated to a printed circuit board, exposed, spray-developed, hardened, coated with a flux, and then placed in a com. Pb-Sn solder bath to produce a clean solder mask-coated circuit board.

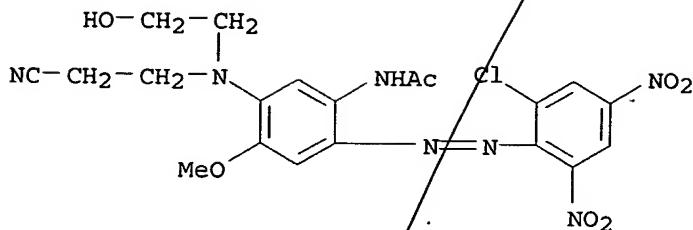
IT 23807-28-5

RL: USES (Uses)

(dry photoresist with surface-roughened support and photopolymerizable layer contg., with improved optical properties)

RN 23807-28-5 CAPLUS

CN Acetamide, N- [2- [(2-chloro-4,6-dinitrophenyl)azo]-5- [(2-cyanoethyl) (2-hydroxyethyl)amino]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)

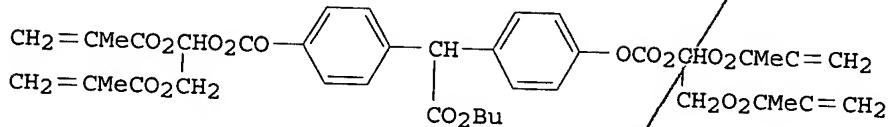


IC G03C001-76; G03F007-00  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST dry photoresist surface roughened support  
IT Phenolic resins uses and miscellaneous  
RL: USES (Uses)  
IT (dry photoresist with surface-roughened support and photopolymerizable layer contg., with improved optical properties)  
IT Polyesters, uses and miscellaneous  
RL: USES (Uses)  
IT (dry photoresists with support from silica particle-contg., for improved optical properties)  
IT Soldering  
IT (masks for, dry photoresists with improved optical properties for fabrication of)  
IT Resists  
IT (photo-, dry, with support having roughened surface layer for improved optical properties)  
IT Electric circuits  
IT (printed, dry photoresist with improved optical properties for fabrication of)  
IT 548-62-9 9002-89-5  
RL: USES (Uses)  
IT (dry photoresist with surface-roughened support and interlayer contg., with improved optical properties)  
IT 467-63-0 602-56-2 3089-11-0 9016-83-5 23807-28-5  
IT 25322-68-3 25721-76-0 25852-47-5 58601-54-0 67952-50-5  
IT 69432-41-3 69666-56-4 73539-63-6 73539-65-8 79295-99-1  
IT 92281-84-0 92460-68-9  
RL: USES (Uses)  
IT (dry photoresist with surface-roughened support and photopolymerizable layer contg., with improved optical properties)

L19 ANSWER 41 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1984:501227 CAPLUS  
DOCUMENT NUMBER: 101:101227  
TITLE: Photopolymerizable copying materials  
INVENTOR(S): Doenges, Reinhard; Horn, Klaus  
PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.  
SOURCE: Eur. Pat. Appl., 46 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent

LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 97864	A1	19840111	EP 1983-105776	19830613
EP 97864	B1	19861112		
R: DE, FR, GB				
DE 3227913	A1	19840202	DE 1982-3227913	19820727
JP 59005241	A2	19840112	JP 1983-105097	19830614
JP 03052856	B4	19910813		
US 4530747	A	19850723	US 1983-504180	19830614
BR 8303269	A	19840207	BR 1983-3269	19830620
PRIORITY APPLN. INFO.:			DE 1982-3223105	19820621
GI			DE 1982-3227913	19820727



AB Photopolymerizable compns. which are insensitive to O are composed of a polymer binder, a radiation-activatable polymn. initiator, and a polymerizable compd. of the formula  $(CH_2=CR_1CO_2CH_2CO)^2$  ( $R = H$  or  $CH_2:CR_1CO_2CH_2$ ;  $R_1 = H$  or Me; Z = phenylene, biphenylene, alkylene, cycloalkylene, oxyalkyleneoxy, and the like;  $Z_1 = O$  or  $(CH_2)_2CO$ ). These compns. are esp. useful for the prodn. of photoresists and printing plates. Thus, an electrochem. grained and anodized Al plate was coated at 3.7-4 g/m<sup>2</sup> (dry) with a compn. contg. maleic anhydride-styrene copolymer 2, I 2, 9-phenylacridine 0.125, an azo dye 0.06, butanone 26, and BuOAc 14 parts, dried, exposed in a vacuum frame, and developed with an alk. developer to show 5 fully crosslinked steps.

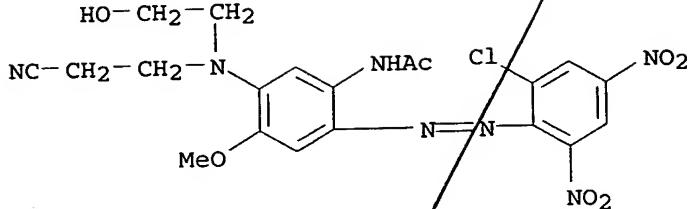
IT 23807-28-5

RL: USES (Uses)

(photopolymerizable compns. contg. acrylates or methacrylates and, oxygen-insensitive, for photoresists and printing plates)

RN 23807-28-5 CAPLUS

CN Acetamide, N-[2-[(2-chloro-4,6-dinitrophenyl)azo]-5-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



IC G03C001-68; C08F020-26; C08F020-28; C08F020-30  
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST acrylate methacrylate photopolymer oxygen insensitive; photoimaging acrylate methacrylate; photoresist acrylate methacrylate; printing plate acrylate methacrylate photopolymer; lithog plate acrylate methacrylate  
IT Photoimaging compositions and processes  
(photopolymer, oxygen-insensitive, contg. acrylates or methacrylates)  
IT Lithographic plates  
Printing plates  
(photopolymerizable compn. contg. acrylates or methacrylates for fabrication of, oxygen-insensitive)  
IT Silica gel, uses and miscellaneous  
RL: USES (Uses)  
(photopolymerizable compns. contg. acrylates or methacrylates and, oxygen-insensitive, for photoresists and printing plates)  
IT Resists  
(photo-, oxygen-sensitive, contg. photopolymerizable acrylates or methacrylates)  
IT Electric circuits  
(printed, oxygen-insensitive photopolymerizable compns. contg. acrylates or methacrylates for fabrication of)  
IT 101-84-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(Friedel-Crafts reaction of, with chloroacetyl chloride)  
IT 79-04-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(Friedel-Crafts reactions of)  
IT 75-44-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(chlorocarbonylation by, of phenols)  
IT 2971-36-0 71077-33-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(chlorocarbonylation of, by phosgene)  
IT 91185-74-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification by, of hydroxy group-contg. methacrylate derivs.)  
IT 4378-33-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification by, of hydroxy group-contg. methacrylates)  
IT 2024-88-6 4374-75-8 6918-68-9 31912-72-8 32892-83-4  
RL: RCT (Reactant); RACT (Reactant or reagent)

(esterification by, of hydroxyethyl methacrylate)

IT 868-77-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of)

IT 1830-78-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, by chlorocarbonyl compd.)

IT 1885-21-8 91174-67-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, by hydroxy group-contg. methacrylate derivs.)

IT 24860-53-5 47164-46-5 67442-67-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, methacrylic acid)

IT 602-56-2 23807-28-5 25086-15-1 41137-60-4 58206-31-8  
58601-54-0  
RL: USES (Uses)  
(photopolymerizable compns. contg. acrylates or methacrylates and,  
oxygen-insensitive, for photoresists and printing plates)

IT 30764-80-8 52645-24-6 91174-38-8 91174-39-9 91174-40-2  
91174-41-3 91174-42-4 91174-43-5 91174-44-6 91174-45-7  
91174-46-8 91174-47-9 91174-48-0 91174-49-1 91174-50-4  
91174-51-5 91174-52-6 91174-53-7 91174-54-8 91174-55-9  
91174-56-0 91174-57-1 91174-58-2 91174-59-3 91174-60-6  
91174-61-7 91174-62-8 91174-63-9 91174-64-0 91174-65-1  
91185-68-1 91185-69-2 91185-70-5 91185-71-6 91185-72-7  
91185-73-8 91513-10-9 91513-11-0  
RL: USES (Uses)  
(photopolymerizable compns. contg., oxygen-insensitive, for photoresist  
and printing plates)

IT 104-66-5P 622-87-7P  
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and Friedel-Crafts reaction of, with chloroacetyl chloride)

IT 37494-06-7P  
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and esterification of, by acrylic acid)

IT 3030-53-3P 88949-90-0P 91174-68-4P  
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and esterification of, by methacrylic acid)

IT 17854-01-2P 91174-66-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

IT 79-10-7, reactions 79-41-4, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with chloroacetyl compds.)

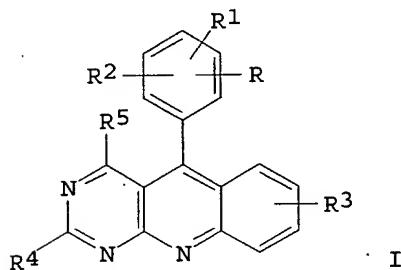
IT 108-95-2, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with dibromodiethyl ether)

IT 589-10-6 5414-19-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with phenol)

ACCESSION NUMBER: 1984:501226 CAPLUS  
DOCUMENT NUMBER: 101:101226  
TITLE: 10-Phenyl-1,3,9-triazaanthracenes and  
photopolymerizable mixture containing them  
INVENTOR(S): Bosse, Dieter; Wingen, Rainer; Horn, Klaus; Lutz,  
Walter  
PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.  
SOURCE: Ger. Offen., 33 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3232620	A1	19840308	DE 1982-3232620	19820902
EP 103218	A1	19840321	EP 1983-108311	19830824
EP 103218	B1	19860430		
R: DE, FR, GB				
US 4464457	A	19840807	US 1983-527466	19830829
JP 59065090	A2	19840413	JP 1983-159118	19830901
PRIORITY APPLN. INFO.:			DE 1982-3232620	19820902

GI



AB Photopolymerizable compns. having a high sensitivity in the spectral region of metal-halogen lamps are composed of an ethylenically unsatd. compd. and a 10-phenyl-1,3,9-triazaanthracene deriv. (I; R,R',R2 = H, halogen, alkyl, alkoxy, or a condensed arom. group; R3 = H, halogen, alkyl, alkoxy, haloalkyl, alkylcarbonyl, alkoxy carbonyl, dialkylamino, or a condensed arom. group; R4,R5 = OH, alkoxy, dialkylamino) as a photoinitiator. Thus, an electrolytically roughened and anodized Al plate was coated with a compn. contg. a methacrylic acid-Me methacrylate copolymer (acid no. 110) 4.0, trimethylolethane triacrylate 4.0, a blue azo dye, I (R,R',R2 = H; R3 = 7-F, R4, R5 = MeO) 0.21, ethylene glycol mono-Me ether 38, and BuOAc 18 parts at 25 g/m<sup>2</sup> (dry), overcoated with a poly(vinyl alc.) layer at 5 g/m<sup>2</sup> (dry), exposed to a 5 kW metal-halogen lamp under 13-step wedge, heated to 90.degree. for a short period, developed with a Na metasilicate soln., sprayed with 1% aq. H<sub>3</sub>PO<sub>4</sub>,

colored, gummed, dried, and used in an offset press to produce apprx.100,000 copies. The developed plate showed 5 complete steps.

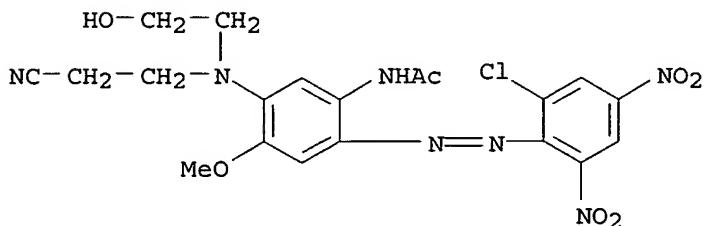
IT 23807-28-5

RL: USES (Uses)

(photopolymerizable compns. contg. phenyltriazaanthracene deriv. photoinitiator and, for photoresist and printing plates)

RN 23807-28-5 CAPLUS

CN Acetamide, N-[2-[(2-chloro-4,6-dinitrophenyl)azo]-5-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



IC C07D471-04; C08F002-50; G03C001-68; G03F007-26

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST phenyltriazaanthracene deriv photoinitiator photopolymer photoimaging; offset plate printing photopolymer

IT Lithographic plates

Printing plates

(photopolymerizable compns. contg. phenyltriazaanthracene deriv. photoinitiators for fabrication of)

IT Resists

(photo-, photopolymn. compns. contg. phenyltriazaanthracene deriv. photoinitiators for)

IT Photoimaging compositions and processes

(photopolymerizable, contg. phenyltriazaanthracene derivs. as photoinitiators)

IT Printing plates

(screen, photopolymerizable compns. contg. phenyltriazaanthracene deriv. photoinitiators for fabrication of)

IT 50270-27-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(chlorination of)

IT 109-16-0 17354-14-2 19778-85-9 23807-28-5 25086-15-1

41137-60-4 58601-54-0 90760-16-0

RL: USES (Uses)

(photopolymerizable compns. contg. phenyltriazaanthracene deriv. photoinitiator and, for photoresist and printing plates)

IT 91545-98-1 91545-99-2 91546-00-8 91546-01-9 91546-02-0

91546-03-1 91546-04-2 91546-05-3 91546-06-4 91546-07-5

91546-08-6 91546-09-7 91546-10-0 91546-11-1 91546-12-2

91546-13-3 91546-14-4 91585-67-0

RL: USES (Uses)

(photopolymerizable compns. contg., as photoinitiator)

IT 77456-66-7P  
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and Friedel-Crafts acetylation of)  
IT 91546-32-6P 91546-33-7P 91546-34-8P 91546-35-9P 91546-36-0P  
91546-37-1P 91546-38-2P 91546-39-3P 91546-40-6P 91546-41-7P  
91546-42-8P 91546-43-9P 91585-69-2P 91585-70-5P 91585-71-6P  
91585-72-7P 91585-73-8P 91585-74-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and reaction of)  
IT 91546-44-0P 91546-45-1P 91546-46-2P 91546-47-3P 91546-48-4P  
91546-49-5P 91546-50-8P 91585-75-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and reaction of, with aniline derivs.)  
IT 91546-15-5P 91546-16-6P 91546-17-7P 91546-18-8P 91546-19-9P  
91546-20-2P 91546-21-3P 91546-22-4P 91546-23-5P 91546-24-6P  
91546-25-7P 91546-26-8P 91546-27-9P 91546-28-0P 91546-29-1P  
91546-30-4P 91546-31-5P 91585-68-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and ring closure of)

L19 ANSWER 43 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1983:117141 CAPLUS  
DOCUMENT NUMBER: 98:117141  
TITLE: Photopolymerizable composition and copying material  
from it  
INVENTOR(S): Geissler, Ulrich; Herwig, Walter; Fetsch, Elisabeth  
PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.  
SOURCE: Eur. Pat. Appl., 27 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 65285	A2	19821124	EP 1982-104185	19820513
EP 65285	A3	19830216		
EP 65285	B1	19860129		
R: AT, BE, CH, DE, FR, GB, IT, NL, SE				
DE 3120052	A1	19821209	DE 1981-3120052	19810520
AT 17792	E	19860215	AT 1982-104185	19820513
JP 57196231	A2	19821202	JP 1982-81707	19820517
JP 04047812	B4	19920805		
US 4495271	A	19850122	US 1982-379865	19820519
PRIORITY APPLN. INFO.: DE 1981-3120052 19810520				
EP 1982-104185 19820513				
AB	Photopolymerizable compns. for use as photoresists and in the prodn. of printing plates are composed of a water-insol., aq. alk. soln. sol. or			

swellable polymer binder, a radiation-activatable, polymn. initiator, and a polymerizable compd. of the formula  $\text{CH}_2:\text{CRCO}(\text{OCH}_2\text{CHMe})_n\text{O}_2\text{CCR}:\text{CH}_2$  ( $\text{R} = \text{H}$  or  $\text{Me}$ ;  $n = 2-13$ ). The mixt. gives nonrubbery layers which are unaffected by atm.  $\text{O}_2$ . Thus, a soln. contg. a hexyl methacrylate-methacrylic acid-styrene copolymer (60:30:10; av. mol. wt. .apprx.35,000; and acid no. .apprx.200) 66, polypropylene glycol-420-dimethacrylate 42, 9-phenylacridine 1.3, a blue pigment (obtained through coupling a 2,4-dinitro-6-chlorobenzenediazonium salt with 2-methoxy-5-acetylamino-N-cyanoethyl-N-hydroxyethylaniline) 0.2, butanone 240, and  $\text{EtOH}$  30 parts was coated on a Cu-laminated phenolic plate and dried at 100.degree. to give an 80 .mu.m layer. The plate was then exposed in a vacuum frame to an original with 13 steps (d. increments of 0.15) and a line original with line widths and distances down to 80 .mu.m by using a 5 kW metal halide lamp at 110 cm. After exposure, the layer was developed by spraying with 0.8% aq.  $\text{Na}_2\text{CO}_3$  for 100 s to show 5-6 completely crosslinked steps.

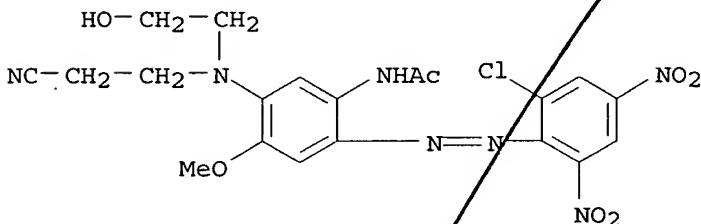
IT 23807-28-5 84870-64-4

RL: USES (Uses)

(photopolymerizable compns. contg., for photoresists and printing plate prodn.)

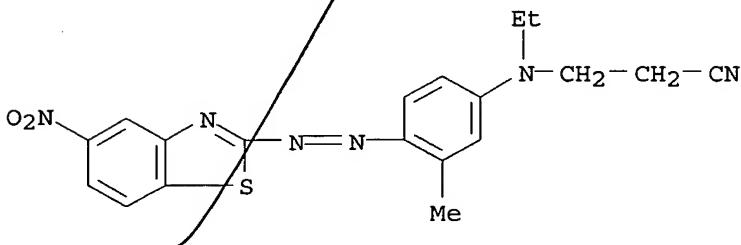
RN 23807-28-5 CAPPLUS

CN Acetamide, N-[2-[(2-chloro-4,6-dinitrophenyl)azo]-5-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



RN 84870-64-4 CAPPLUS

CN Propanenitrile, 3-[(ethyl[4-[(5-nitro-2-benzothiazolyl)azo]-3-methylphenyl]amino)- (9CI) (CA INDEX NAME)



IC G03C001-68

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photopolymer compn printing plate; polypropylene glycol acrylate printing plate; methacrylate polypropylene glycol printing plate

- Page 109Lee288

IT Printing plates  
 (photopolymerizable compns. contg. acrylic polymer binder and polypropylene glycol acrylate or methacrylate for fabrication of)

IT Acrylic polymers, uses and miscellaneous  
 RL: USES (Uses)  
 (photopolymerizable compns. contg., for photoresists and printing plate prodn.)

IT Resists  
 (photo-, contg. acrylic polymer binder and polypropylene glycol acrylate or methacrylate)

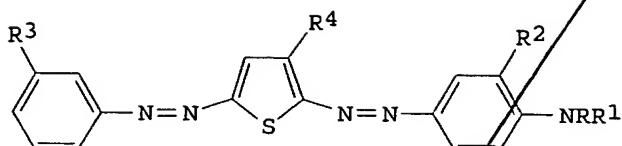
IT 548-62-9 602-56-2 23807-28-5 25852-47-5 25852-49-7  
 52496-08-9 58601-54-0 64111-89-3 84870-64-4 84886-87-3  
 84964-00-1  
 RL: USES (Uses)  
 (photopolymerizable compns. contg., for photoresists and printing plate prodn.)

L19 ANSWER 44 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1982:618025 CAPLUS  
 DOCUMENT NUMBER: 97:218025  
 TITLE: Disazo dyes for polyester fibers  
 INVENTOR(S): Imahori, Seiichi; Himeno, Kiyoshi; Maeda, Shuichi  
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd. , Japan  
 SOURCE: Ger. Offen., 44 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3151114	A1	19820812	DE 1981-3151114	19811223
DE 3151114	C2	19900201		
JP 57109860	A2	19820708	JP 1980-189018	19801226
JP 01005069	B4	19890127		
JP 57111356	A2	19820710	JP 1980-186675	19801229
JP 63063592	B4	19881207		
JP 57125262	A2	19820804	JP 1981-10690	19810127
JP 03002910	B4	19910117		
JP 57125263	A2	19820804	JP 1981-10691	19810127
JP 03005427	B4	19910125		
PRIORITY APPLN. INFO.:			JP 1980-189018	19801226
			JP 1980-186675	19801229
			JP 1981-10690	19810127
			JP 1981-10691	19810127

GI



I

AB Fast brilliant blue or reddish blue dyes (I) are prep'd., where R = H, alkyl, cyanoalkyl, alkoxyalkyl, alkenyl, etc., R1 = H, hydroxyalkyl, alkoxyalkyl, acyloxyalkyl, etc., R2 = H, Me, Cl, or MeO, R3 = H, Cl, CF3, or NO2, R4 = CN, lower alkoxy carbonyl, or lower alkoxyalkoxy carbonyl, and R5 = H, Cl, Br, Me, or acylamino. I exhibit good pH and temp. stability during dyeing and good dischargeability to white with little staining of white areas in alkali resist and discharge printing. Thus, coupling 2-amino-3-cyanothiophene [4651-82-5] with diazotized aniline [62-53-3], diazotization of the monoazo intermediate [83749-49-9], and coupling with N-allyl-N-(.beta.-cyanoethyl)aniline [27325-93-5] gave I (R = CH<sub>2</sub>CH<sub>2</sub>CN, R1 = CH<sub>2</sub>CH:CH<sub>2</sub>, R2 = R3 = R5 = H, R4 = CN) [83749-48-8], which produced a brilliant red-blue shade with good fastness to light, sublimation, and water. Approx. 180 other I are described.

IC C09B031-043; D06P001-04; D06P003-52

CC 41-3 (Dyes, Fluorescent Brighteners, and Photographic Sensitizers)

ST polyester fiber dye; disazo disperse dye; thiophene disazo dye; azo disperse dye

IT Polyester fibers, uses and miscellaneous

RL: USES (Uses)

(dyes for, [(aminophenyl)azo] (phenylazo)thiophene derivs. as)

IT Textile printing

(on polyester, dyes for, [(aminophenyl)azo] (phenylazo)thiophene derivs. as)

IT Dyes, azo

(disperse, [(aminophenyl)azo] (phenylazo)thiophene derivs., for dyeing and printing polyester fibers)

IT 62-53-3, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(coupling of diazotized, with aminocyanothiophene)

IT 27325-93-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(coupling of, with diazotized aminothiophene deriv.)

IT 4651-82-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(coupling of, with diazotized aniline)

IT 83742-50-1 83742-51-2 83742-52-3 83742-53-4 83742-54-5

83742-55-6 83742-56-7 83742-57-8 83742-58-9 83742-59-0

83742-60-3 83742-61-4 83742-62-5 83742-63-6 83742-64-7

83742-65-8 83742-66-9 83742-67-0 83742-68-1 83742-69-2

83742-70-5 83742-71-6 83742-72-7 83742-73-8 83742-74-9

83742-75-0	83742-76-1	83742-77-2	83742-78-3	83742-79-4
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83748-75-8	83748-76-9	83748-77-0	83748-78-1	83748-79-2
83748-80-5	83748-81-6	83748-82-7	83748-83-8	83748-84-9
83748-85-0	83748-86-1	83748-87-2	83748-88-3	83748-89-4
83748-90-7	83748-91-8	83748-92-9	83748-93-0	83748-94-1
83748-95-2	83748-96-3	83748-97-4	83748-98-5	83748-99-6
83749-00-2	83749-01-3	83749-02-4	83749-03-5	83749-04-6
83749-05-7	83749-06-8	83749-07-9	83749-08-0	83749-09-1
83749-10-4	83749-11-5	83749-12-6	83749-13-7	83749-14-8
83749-15-9	83749-16-0	83749-17-1	83749-18-2	83749-19-3
83749-20-6	83749-21-7	83749-22-8	83749-23-9	83749-24-0
83749-25-1	83749-26-2	83749-27-3	83749-28-4	83749-29-5
83749-30-8	83749-31-9	83749-32-0	83749-33-1	83749-34-2
83749-35-3	83749-36-4	83749-37-5	83749-38-6	83749-39-7
83749-40-0	83749-41-1	83749-42-2	83749-43-3	83749-44-4
83749-45-5	83749-46-6	83749-47-7	83763-88-6	83763-89-7
83763-90-0				

RL: TEM (Technical or engineered material use); USES (Uses)  
(dye, for polyester fibers)

IT 83749-48-8

RL: TEM (Technical or engineered material use); USES (Uses)  
(dye, for polyester fibers, prepn. of)

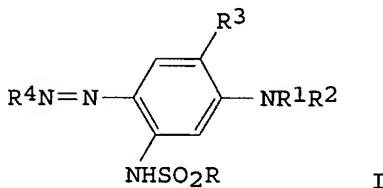
IT 83749-49-9P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. and coupling of diazotized, with allyl(cyanoethyl)aniline)

L19 ANSWER 45 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1982:511258 CAPLUS  
DOCUMENT NUMBER: 97:111258  
TITLE: Discharge-resist prints on textile materials  
INVENTOR(S): Buehler, Ulrich; Ribka, Joachim; Roth, Kurt; Stahl, Theo  
PATENT ASSIGNEE(S): Cassella A.-G., Fed. Rep. Ger.  
SOURCE: Eur. Pat. Appl., 41 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 51818	A1	19820519	EP 1981-109196	19811029
EP 51818	B1	19850904		
R: CH, DE, FR, GB, IT				
DE 3042144	A1	19820722	DE 1980-3042144	19801108
US 4398913	A	19830816	US 1981-304099	19810921
JP 57112481	A2	19820713	JP 1981-177279	19811106
PRIORITY APPLN. INFO.:			DE 1980-3042144	19801108
GI				



AB Use of disperse dyes (I; R = substituted or unsubstituted C1-4 alkyl or phenyl; R1 = substituted or unsubstituted C1-4 alkyl, alkoxy carbonylalkyl, phenoxy carbonyloxy, cyclopentyl, cyclohexyl, Ph, or alkenyl; R3 = H, Cl, Br, alkyl, or substituted or unsubstituted alkoxy; R4 = substituted Ph, thiazolyl, thienyl, nitrobenzothiazolyl, or nitrobenzoisothiazolyl; R2, R3, and R4 contain  $\geq$  one ethoxycarbonyl group) in combination with a base discharge agent provides prints with sharp contours in the white discharge resist printing of polyester and cellulosic-polyester textiles. Thus, a polyester fabric was impregnated with a pad bath contg. I (R = Me; R1 = R2 = EtOCH<sub>2</sub>CH(OH)CH<sub>2</sub>; R4 = 6-CNC<sub>6</sub>H<sub>2</sub>(NO<sub>2</sub>)<sub>2</sub>-2,4) [82855-14-9] 20, NaH<sub>2</sub>PO<sub>4</sub> 3, NaClO<sub>3</sub> 10, and acrylic acid polymer antimigration agent 20 parts/L. The fabric was dried and printed with a paste contg. 10% locust bean thickener 600, water 120, Na<sub>2</sub>CO<sub>3</sub> 80, polyethylene glycol 100, and glycerol 100 parts/L. After fixation with superheated steam for 7 min at 175.degree., the fabric was given a reductive aftertreatment and then soaped, rinsed, and dried. The blue print obtained had very good fastness properties as well as a very good white ground with sharp contours.

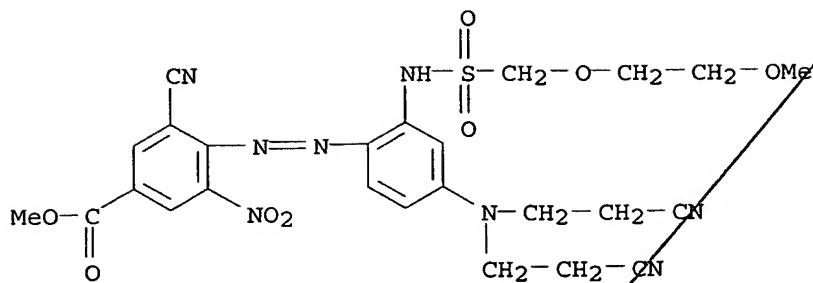
IT 82855-18-3

RL: USES (Uses)

(dyes, for white discharge resist printing on polyester fabrics)

RN 82855-18-3 CAPLUS

CN Benzoic acid, 4-[[4-[bis(2-cyanoethyl)amino]-2-[[[(2-methoxyethoxy)methyl]sulfonyl]amino]phenyl]azo]-3-cyano-5-nitro-, methyl ester (9CI) (CA INDEX NAME)



IC D06P005-12; D06P005-17

ICA C09B029-08

CC 40-6 (Textiles)

ST white discharge resist printing; polyester textile resist printing; disperse dye white dischargeable

IT Textile printing

(discharge, resist, on polyester textiles, white dischargeable disperse dyes for)

IT Dyes

(disperse, white dischargeable, for resist printing on polyester fabrics)

IT 82855-14-9 82855-15-0 82855-16-1 82855-17-2 82855-18-3

82855-19-4

RL: USES (Uses)

(dyes, for white discharge resist printing on polyester fabrics)

IT 60-09-3D, derivs. 82855-20-7D, derivs. 82855-21-8D, derivs.

82855-22-9D, derivs. 82855-23-0D, derivs.

RL: USES (Uses)

(dyes, white dischargeable, for resist printing on polyester fabrics)

L19 ANSWER 46 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1982:60871 CAPLUS

DOCUMENT NUMBER: 96:60871

TITLE: Radiation-polymerizable mixture and its use in preparing radiation sensitive copying material

INVENTOR(S): Sander, Juergen; Horn, Klaus

PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.

SOURCE: Ger. Offen., 56 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2952697	A1	19810702	DE 1979-2952697	19791229
AU 8065686	A1	19810709	AU 1980-65686	19801223
AU 535004	B2	19840223		

ZA 8008035	A	19820127	ZA 1980-8035	19801223
CA 1168792	A1	19840605	CA 1980-367477	19801223
EP 31593	A1	19810708	EP 1980-108191	19801224
EP 31593	B1	19840725		
R: BE, CH, DE, FR, GB, IT, NL, SE				
US 4322491	A	19820330	US 1980-220090	19801224
ES 498152	A1	19821101	ES 1980-498152	19801224
JP 56101143	A2	19810813	JP 1980-182982	19801225
JP 01040337	B4	19890828		
BR 8008527	A	19810721	BR 1980-8527	19801229

PRIORITY APPLN. INFO.: DE 1979-2952697 19791229

AB Radiation-polymerizable compns. for reprog. use are composed a compd. with terminal ethylenically unsatd. groups which is capable of undergoing radical-induced polymn. and which has the formula  $RC(:CH_2)ZC(:CH_2)R$  (R = an electron-withdrawing group; Z = a C1-15 divalent aliph. group that can be substituted with a heteroatom, a divalent cycloaliph. group with 3-15 C atoms, or a mixt. of aliph. and arom. groups with 7-15 C atoms), a polymer binder, and a radiation-activatable polymn. initiator. Thus, an electrochem. grained and anodized Al plate was treated with an aq. soln. of poly(vinylphosphonic acid) and then coated with a compn. contg. a 34.7% MeCOEt soln. of a methacrylic acid-Me methacrylate copolymer 11.7, a compd. of the formula  $EtO_2C(:CH_2)C(CH_2)3C(:CH_2)CO_2Et$  2.0, trimethylethane triacrylate 2.0, 9-phenylacridine 0.07, 4-dimethylamino-4'-methyldibenzalacetone 0.07, an azo dye from a 2,4-dinitro-6-chlorobenzenediazonium salt and 2-methoxy-5-acetylamino-N-cyanoethyl-N-hydroxyethylaniline 0.04, ethylene glycol monomethyl ether 38.0, and BuOAc 13.5 parts at 2.8-3 g/m<sup>2</sup> (dry), overcoated with a 15% aq. poly(vinyl alc.) soln. at 4-5 g/m<sup>2</sup> (dry), exposed through a 13-step step wedge, and developed to show 6 steps.

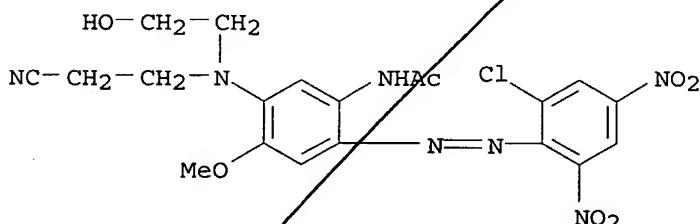
IT 23807-28-5

RL: USES (Uses)

(photopolymerizable compns. contg. alkadienes and, for photoresists and printing plate fabrication)

RN 23807-28-5 CAPLUS

CN Acetamide, N-[2-[(2-chloro-4,6-dinitrophenyl)azo]-5-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



IC C08F022-00; C08F016-36; G03C001-68; G03F007-10

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST alkadiene photopolymer photoimaging compn; printing plate alkadiene photopolymer; lithog plate alkadiene photopolymer; photoresist alkadiene

photopolymer  
IT Nuclear magnetic resonance  
(of alkadienes)  
IT Acrylic polymers, uses and miscellaneous  
RL: USES (Uses)  
(photopolymerizable compns. contg. alkadienes and, for photoresists and printing plate fabrication)  
IT Photoimaging compositions and processes  
(photopolymerizable compns. contg. alkadienes as)  
IT Lithographic plates  
Printing plates  
(photopolymerizable compns. contg. alkadienes for fabrication of)  
IT Alkadienes  
RL: USES (Uses)  
(photopolymerizable compns. contg., for photoresists and printing plate fabrication)  
IT Resists  
(photo-, photopolymerizable compns. contg. alkadienes as)  
IT 225-61-6 602-56-2 1328-54-7 4197-25-5 4314-14-1 6856-08-2  
8004-87-3 9011-13-6 19778-85-9 23807-28-5 25086-15-1  
33270-70-1 38552-36-2 71838-72-7  
RL: USES (Uses)  
(photopolymerizable compns. contg. alkadienes and, for photoresists and printing plate fabrication)  
IT 4481-41-8 27905-63-1 32670-57-8 34656-17-2 42028-68-2 69565-07-7  
80323-24-6 80323-25-7 80323-26-8 80323-27-9 80323-28-0  
80323-29-1 80323-30-4 80323-31-5 80323-32-6 80323-33-7  
80323-34-8 80323-35-9 80323-36-0 80323-37-1 80323-38-2  
80323-39-3 80323-40-6 80323-41-7 80323-42-8 80323-43-9  
80323-44-0 80323-45-1 80323-46-2 80323-47-3 80323-48-4  
80323-49-5 80323-50-8 80323-51-9 80323-52-0 80323-53-1  
80323-54-2 80323-55-3 80323-56-4 80323-57-5 80323-58-6  
80323-59-7 80330-82-1 80330-83-2 80330-84-3  
RL: USES (Uses)  
(photopolymerizable compns. contg., for photoresists and printing plate fabrication)

L19 ANSWER 47 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1982:60870 CAPLUS  
DOCUMENT NUMBER: 96:60870  
TITLE: Photopolymerizable mixture and its use in preparing photopolymerizable copying material  
INVENTOR(S): Sander, Juergen; Horn, Klaus  
PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.  
SOURCE: Ger. Offen., 33 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 2952698	A1	19810702	DE 1979-2952698	19791229
CA 1152245	A1	19830816	CA 1980-367431	19801223
EP 31592	A1	19810708	EP 1980-108190	19801224
EP 31592	B1	19831207		
R: BE, CH, DE, FR, GB, IT, NL, SE				
US 4327170	A	19820427	US 1980-220089	19801224
JP 56101142	A2	19810813	JP 1980-182981	19801225
JP 01040336	B4	19890828		

PRIORITY APPLN. INFO.: DE 1979-2952698 19791229

AB Photopolymerizable mixts. for reprog. use are composed of a polymerizable compd. with ethylenically unsatd. end groups capable of undergoing radical-induced polymn. and having structural repeating units of the formula - (COC(:CH<sub>2</sub>)ZC(:CH<sub>2</sub>)CO<sub>2</sub>ZOn (Z = C1-15 alkylene group which may contain a heteroatom, a divalent cycloaliph. group with 3-15 C atoms, or a mixt. of aliph.-arom. groups with 7-15 C atoms; Z<sub>1</sub> = C2-50 aliph. group which may contain a heteroatom, a divalent cycloaliph. group with 3-15 C atoms, a mixt. of aliph.-arom. groups with 7-15 C atoms, or preferably C<sub>m</sub>H<sub>2m</sub>(OC<sub>m</sub>H<sub>2m</sub>)<sub>k</sub> where m = 2-8 and k = 0-15; n = 2-30), a polymer binder, and a photoinitiator. Thus, an electrochem. grained and anodized Al plate was treated with aq. poly(vinylphosphonic acid) and then coated with a soln. contg. a 33.4% MeCOEt soln. of a methacrylic acid-Me methacrylate copolymer 11.7, an unsatd. polyester from diethylene glycol and HO<sub>2</sub>CO(:CH<sub>2</sub>)(CH<sub>2</sub>)<sub>2</sub>C(:CH<sub>2</sub>)CO<sub>2</sub>H 2.0, trimethylolethane triacrylate 2.0, 9-phenylacridine 0.07, 4-dimethylamino-4'-methyldibenzal acetone 0.07, an azo dye from a 2,4-dinitro-6-chlorobenzenediazonium salt and 2-methoxy-5-acetylamino-N-cyanoethyl-N-hydroxyethylaniline 0.04, ethylene glycol monomethyl ether 38.0, and BuOAc 13.5 parts at 2.8-3 g/m<sup>2</sup> (dry), overcoated with a 15% aq. poly(vinyl alc.) soln. at 4-5 g/m<sup>2</sup> (dry), exposed through a step wedge, and developed to show 3 steps.

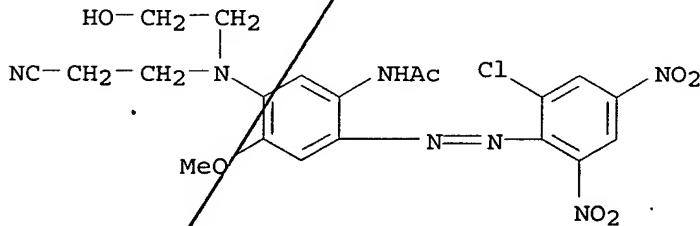
IT 23807-28-5

RL: USES (Uses)

(photopolymerizable compns. contg. unsatd. polyesters and, for photoresists and printing plate fabrication)

RN 23807-28-5 CAPLUS

CN Acetamide, N-[2-[(2-chloro-4,6-dinitrophenyl)azo]-5-[(2-cyanoethyl)(2-hydroxyethyl)aminol]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



IC G03C001-68

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photopolymer polyester unsatd lithog plate; printing plate unsatd

polyester photopolymer; photoresist unsatd polyester  
IT Photoimaging compositions and processes  
(contg. unsatd. polyesters)  
IT Nuclear magnetic resonance  
(of unsatd. polyesters)  
IT Acrylic polymers, uses and miscellaneous  
RL: USES (Uses)  
(photopolymerizable compns. contg. unsatd. polyesters and, for  
photoresists and printing plate fabrication)  
IT Lithographic plates  
Printing plates  
(photopolymerizable compns. contg. unsatd. polyesters for fabrication  
of)  
IT Resists  
(photo-, photopolymerizable compns. contg. unsatd. polyesters as)  
IT Polyesters, uses and miscellaneous  
RL: USES (Uses)  
(unsatd., photopolymerizable compns. contg., for photoresists and  
printing plate fabrication)  
IT 602-56-2 8004-87-3 19778-85-9 23807-28-5 25086-15-1  
38552-36-2 58601-54-0  
RL: USES (Uses)  
(photopolymerizable compns. contg. unsatd. polyesters and, for  
photoresists and printing plate fabrication)  
IT 80330-16-1 80330-17-2 80330-18-3 80330-19-4 80330-20-7  
80330-21-8 80330-22-9 80330-23-0 80330-24-1 80330-25-2  
80330-26-3 80338-01-8 80338-02-9 80338-03-0 80338-04-1  
80338-05-2 80338-06-3 80338-07-4 80338-08-5 80338-10-9  
80338-11-0 80338-12-1 80338-21-2 80338-22-3 80338-23-4  
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80338-29-0 80338-30-3 80338-31-4 80338-32-5 80338-33-6  
80338-34-7 80338-35-8 80338-36-9 80338-37-0 80338-38-1  
80338-39-2 80345-70-6 80345-71-7 80346-56-1  
RL: USES (Uses)  
(photopolymerizable compns. contg., for photoresists and printing plate  
fabrication)

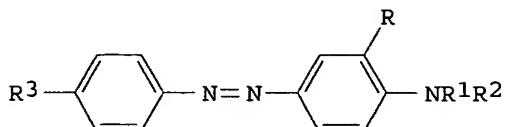
L19 ANSWER 48 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1981:463626 CAPLUS  
DOCUMENT NUMBER: 95:63626  
TITLE: Discharge-resist dyeing of polyester fibers  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP. 56031089	A2	19810328	JP 1979-104715	19790816

PRIORITY APPLN. INFO. :  
GI

JP 1979-104715

19790816



五

AB Hydrophobic fibers were resist- or discharge-dyed using monoazo dyes I (R = halogen, lower alkyl, alkoxy; R<sub>1</sub> = H, optionally substituted lower alkyl; R<sub>2</sub> = substituted lower alkyl; R<sub>3</sub> = NO<sub>2</sub>, lower alkylsulfonyl, CN, SCN, halogen, F<sub>3</sub>C, carboxy ester group). For example, a polyester fabric dyed orange with I (R = Cl, R<sub>1</sub> = H, R<sub>2</sub> = CH<sub>2</sub>CH<sub>2</sub>CN, R<sub>3</sub> = NO<sub>2</sub>) [78172-48-2] showed better discharge properties (by a SnCl<sub>2</sub> compn.) than C.I. Disperse Yellow 5.

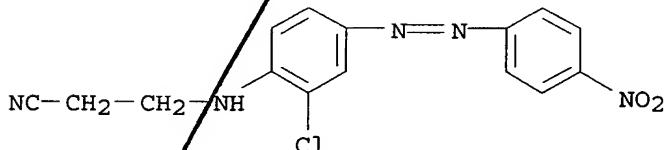
IT 78172-48-2

### RL: USES (Uses)

(dyes, for discharge and resist printing of polyester fibers)

RN 78172-48-2 CAPTUS

CN Propanenitrile, 3-[[2-chloro-4-[(4-nitrophenyl)azo]phenyl]amino]- (9CI)  
(CA INDEX NAME)



IC D06B005-13

CC 39-7 (Textiles)

ST polyester fiber discharge dyeing; azo dye discharge polyester fiber; resist dyeing polyester fiber; printing polyester fiber dye

#### IT Polyester fibers, uses and miscellaneous

### RI: USES (Uses)

(discharge and resist printing of monoazo dyes for)

## IT Textile printing

(discharge resist. of polyester fibers monoazo dyes for)

78172-48-2

PL: USES (Uses)

(dyes for discharge and resist printing of polyester fibers)

1-19 ANSWER 49 OF 56 CARBON COPYRIGHT 2003 ACS OR STN

ACCESSION NUMBER: 1880:613381 CARLUS

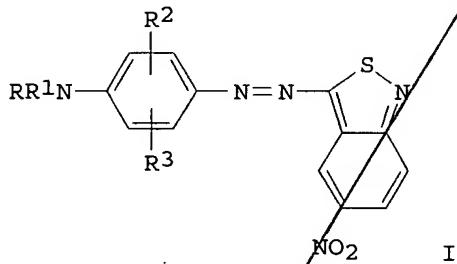
ACCESSION NUMBER: 1980.8133  
DOCUMENT NUMBER: 83-213381

DOCUMENT NUMBER: 93:213381  
TITLE: Photopolymerizable mixture

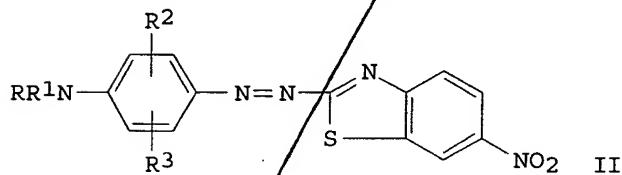
TITLE: Photopolymerizable mixture  
INVENTOR(S): Kluepfel, Kurt; Sprengel, Heide; Deucker, Walter;  
Vollmann, Hansjorg W.

PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.  
 SOURCE: Ger. Offen., 20 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

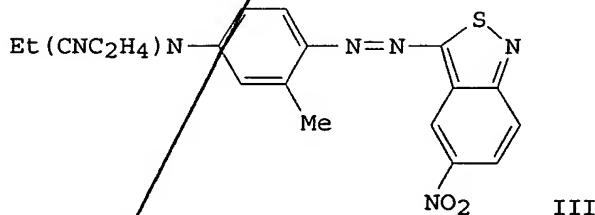
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2807933	A1	19790830	DE 1978-2807933	19780224
EP 3804	A1	19790905	EP 1979-100447	19790215
EP 3804	B1	19820310		
	R: BE, CH, DE, FR, GB, IT, NL, SE			
CA 1121645	A1	19820413	CA 1979-321990	19790221
JP 54123186	A2	19790925	JP 1979-19145	19790222
JP 62012801	B4	19870320		
AT 7901385	A	19830515	AT 1979-1385	19790222
AT 373403	B	19840125		
US 4241166	A	19801223	US 1979-15248	19790226
PRIORITY APPLN. INFO.:			DE 1978-2807933	19780224
GI				



I



II



III

AB A colored photoresist compn. contg. an addn. polymerizable compd. with .gtoreq. 2 ethylenically unsatd. end groups and a b.p. > 100.degree., a polymeric binder, a photoinitiator, and a monoazo dye such as I or II (R, R1 = alkyl or aryl; R2, R3 = H, halogen, alkyl, or alkoxy) produces a contrast image whose exposed regions undergo visible decoloration but regenerate .apprx.90% of the original color d. after subjected to air for .apprx.1 h. Thus, a photoresist layer 25 .mu. thick was deposited on a poly(ethylene terephthalate) foil from a soln. of the reaction product of 1 mol 2,2,4-trimethylhexamethylene diisocyanate and 2 mol 2-hydroxyethyl methacrylate 5.6, styrene-hexyl methacrylate-methacrylic acid (10:60:30) terpolymer 6.5, 9-phenylacridine 0.2, triethylene glycol dimethacrylate 0.15, 4,4'-bis(dimethylamino)benzophenone 0.015, III 0.035, and 2-butanone 28 g and covered with a polyethylene layer of 25 .mu.. The assembly was exposed to a light source of a 5-kW MH lamp for 16 s and the optical extinction at times up to 60 h after exposure compared to the pre-exposure extinction. The pre-exposure extinction was 0.590, the extinction after 0.1 h was 0.36, and that after 60 h was 0.48. The material could be developed by stripping off the top layer.

IT 16586-42-8 68133-69-7 72388-16-0

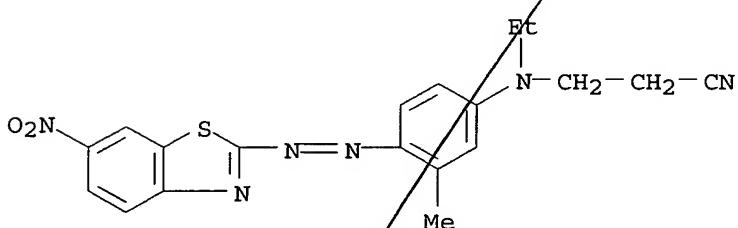
72655-90-4 72655-93-7

RL: USES (Uses)

(photopolymerizable compns. contg. color, for dry-working photoresists regenerating original color d. after exposure)

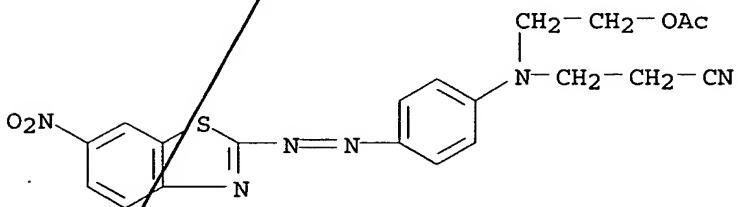
RN 16586-42-8 CAPPLUS

CN Propanenitrile, 3-[ethyl[3-methyl-4-[(6-nitro-2-benzothiazolyl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)



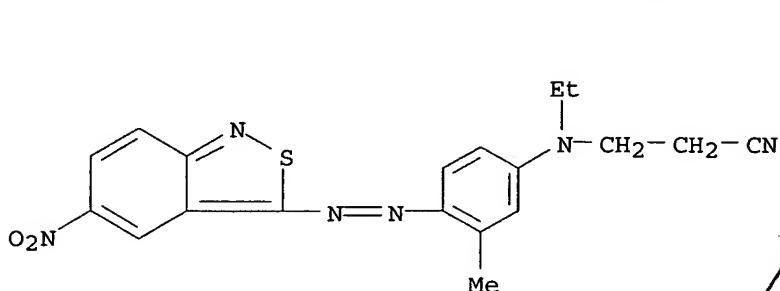
RN 68133-69-7 CAPPLUS

CN Propanenitrile, 3-[[2-(acetoxyethyl)ethyl][4-[(6-nitro-2-benzothiazolyl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)



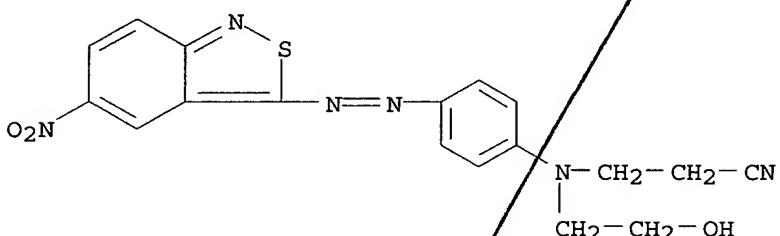
RN 72388-16-0 CAPPLUS

CN Propanenitrile, 3-[ethyl[3-methyl-4-[(5-nitro-2,1-benzisothiazol-3-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)



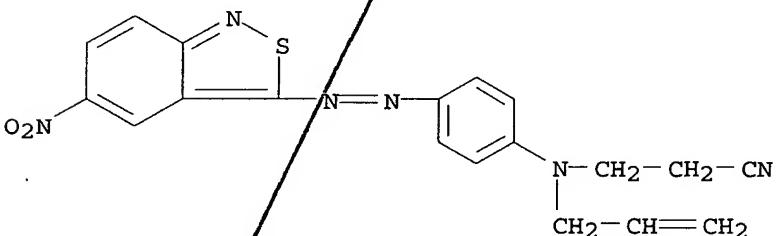
RN 72655-90-4 CAPLUS

CN Propanenitrile, 3-[[(2-hydroxyethyl) [4-[(5-nitro-2,1-benzisothiazol-3-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)



RN 72655-93-7 CAPLUS

CN Propanenitrile, 3-[[4-[(5-nitro-2,1-benzisothiazol-3-yl)azo]phenyl]-2-propenylamino]- (9CI) (CA INDEX NAME)



IC G03C001-68; G03C001-40; G03G013-26; G03F007-20

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
Section cross-reference(s): 36

ST colored dry photoresist material; photopolymerizable compn dry photoresist

IT Dyes, azo

(photopolymerizable compns. contg., color, for dry-working photoresists  
regenerating original color d. after exposure)

IT Resists

(photo-, dry, color photopolymerizable compns. for, with regeneration

of original color d. after exposure)

IT 90-94-8 109-16-0 602-56-2 16586-42-8 19778-85-9  
 25086-15-1 38552-36-2 41137-60-4 58601-54-0 60809-91-8  
 61853-63-2 68133-69-7 72388-16-0 72655-89-1  
 72655-90-4 72655-91-5 72655-92-6 72655-93-7  
 72655-94-8

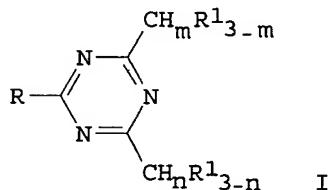
RL: USES (Uses)

(photopolymerizable compns. contg., color, for dry-working  
 photoresists regenerating original color d. after exposure)

L19 ANSWER 50 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1980:485223 CAPLUS  
 DOCUMENT NUMBER: 93:85223  
 TITLE: Radiation-sensitive copying composition  
 INVENTOR(S): Buhr, Gerhard  
 PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.  
 SOURCE: U.S., 9 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4189323	A	19800219	US 1978-899272	19780424
DE 2718259	A1	19781102	DE 1977-2718259	19770425
DE 2718259	C2	19821125		
PRIORITY APPLN. INFO.:			DE 1977-2718259	19770425
GI				



AB Radiation-sensitive copying compns. for use in prep. printing plates, color proofing films, resists, and the like are composed of an ethylenically unsatd. compd. capable of undergoing a polymn. reaction initiated by free radicals or a compd. capable of undergoing a cationic polymn. under the action of acid catalysts and an s-triazine of formula I (R = a substituted or unsubstituted bi- or polynuclear arom. or heterocyclic arom. group which can be partially hydrogenated and is linked by an unsatd. nuclear C atom; R<sup>1</sup> = Br or Cl; m, n = 0-3; and m + n = <5). Thus, an electrolytically roughened and anodized Al plate was whirl-coated with a coating soln. contg. trimethylolethane triacrylate 6.7, methacrylic acid-Me methacrylate copolymer (acid no 115) 6.5, I (R =

4-ethoxy-1-naphthyl; R1 = Cl; m,n = 0) 0.12, ethylene glycol monoethyl ether 64.0, BuOAc 22.7, and 2,4-dinitro-6-chloro-2'-acetamido-5'-methoxy-4'-(.beta.-hydroxyethyl-.beta.-cyanoethyl)aminoazobenzene 0.3 parts by wt. to give a 3-4 g/m<sup>2</sup> dry layer. After providing the plate with a 4 .mu.m thick protective layer of poly(vinyl alc.), the layer was exposed for 30 s at 110 cm to a 5 kW metal halide lamp under a line/screen original, and developed with 1.5% aq. Na metasilicate to give a neg. of the original that when used in an offset press produced 200,000 copies of good quality.

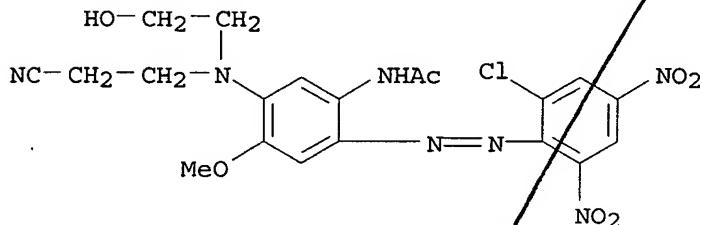
IT 23807-28-5

RL: USES (Uses)

(radiation-sensitive compns. contg. triazine derivs. and, for photoresists, color proofing films, and printing plates)

RN 23807-28-5 CAPLUS

CN Acetamide, N-[2-[(2-chloro-4,6-dinitrophenyl)azo]-5-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



IC G03C001-68

NCL 430281000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)

ST chloromethyltriazine deriv copying compn; color proofing photosensitive chloromethyltriazine; printing plate photosensitive chloromethyltriazine; resist photo photosensitive chloromethyltriazine; photoresist photosensitive chloromethyltriazine

IT Photoimaging compositions and processes

(contg. ethylenically unsatd. compds. and triazine derivs. for color proofing film prodn.)

IT Printing plates

(photosensitive compns. for, contg. ethylenically unsatd. compds. and triazine derivs.)

IT Epoxy resins, uses and miscellaneous

Phenolic resins, uses and miscellaneous

RL: USES (Uses)

(radiation-sensitive compns. contg. triazine derivs. and, for photoresists, color proofing films, and printing plates)

IT Resists

(photo-, contg. ethylenically unsatd. compds. and triazine derivs.)

IT 24481-45-6 24481-46-7 69432-40-2 69432-41-3 69432-42-4

69432-43-5 69432-44-6 69432-45-7 69432-46-8 69432-47-9

69432-53-7 69432-54-8 74217-61-1 74217-63-3

RL: USES (Uses)

(photoinitiator, in radiation-sensitive compns. for color proofing

films, photoresists, and printing plates)

IT 3813-01-2P 69432-48-0P 69432-49-1P 69432-50-4P 69432-51-5P  
69432-57-1P 74217-62-2P 74217-64-4P 74217-65-5P 74217-66-6P  
74217-67-7P 74217-68-8P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

IT 109-16-0 548-62-9 1484-13-5 1628-58-6 9003-35-4 9016-83-5  
19778-85-9 23807-28-5 24687-64-7 25068-38-6 25086-15-1  
41137-60-4 58601-54-0 64502-14-3 69418-08-2 69666-21-3  
74217-21-3 74217-60-0

RL: USES (Uses)  
(radiation-sensitive compns. contg. triazine derivs. and, for  
photoresists, color proofing films, and printing plates)

IT 545-06-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with ethoxynaphthalene in presence of aluminum bromide  
and hydrogen chloride)

IT 5328-01-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with trichloroacetonitrile in presence of aluminum  
bromide and hydrogen chloride)

L19 ANSWER 51 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1980:207139 CAPLUS  
DOCUMENT NUMBER: 92:207139  
TITLE: Photopolymerizable mixture  
INVENTOR(S): Faust, Raimund Josef  
PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.  
SOURCE: Ger. Offen., 19 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2822190	A1	19791122	DE 1978-2822190	19780520
EP 5750	A1	19791212	EP 1979-101410	19790509
EP 5750	B1	19820303		
R: BE, CH, DE, FR, GB, IT, NL, SE				
CA 1121204	A1	19820406	CA 1979-327827	19790517
JP 54153624	A2	19791204	JP 1979-60574	19790518
JP 62039417	B4	19870822		
US 4250248	A	19810210	US 1979-41741	19790523
US 4296196	A	19811020	US 1980-163597	19800627
PRIORITY APPLN. INFO.:			DE 1978-2822190	19780520
			US 1979-41741	19790523

AB Photopolymerizable compns. for use as photoresists and in the fabrication  
of printing plates are composed of a binder that is sol. or swellable in  
aq. soln., a photoinitiator, and an addn. polymerizable polyurethane with  
2 acrylic acid or methacrylic acid ester end groups and having the

formula  $\text{CH}_2:\text{CRCO}_2\text{ZCONHZ}_1(\text{NHCO}_2\text{ZCONHZ}_1)_n\text{NHCO}_2\text{ZCOCR}:\text{CH}_2$  ( $\text{R} = \text{H}$  or  $\text{Me}$ ;  $\text{Z} = (\text{CH}_2\text{CHR}_1\text{O})_p$  where  $\text{R}_1 = \text{R}$  and  $p = 1-4$ ;  $\text{Z}_1 = \text{a satd. aliph. or cycloaliph. group with 2-12 C atoms}$ ;  $\text{Z}_2 = (\text{CH}_2\text{CHR}_2\text{O})_m, (\text{CH}_2\text{CHR}_2\text{S})_m-1\text{CH}_2\text{CHR}_2\text{O}$ ,  $\text{C}_k\text{H}_2\text{kO}$ ,  $\text{CrH}_2\text{r-2O}$  where  $\text{R}_2 = \text{R}$ ,  $m = 2-4$ ,  $k = 2-12$ ,  $r = 4-12$ ,  $n = 2-15$ ). These compns. give developed images which adhere well to metal supports and are resistant to etching solns. Thus, a photopolymerizable compn. contg. hexyl methacrylate-methacrylic acid-styrene copolymer (60:30:10 wt. parts; av. mol. wt. 35,000) 6.5, a diurethane prep'd. by reaction of 2,2,4-trimethylhexamethylene diisocyanate 1 mol with hydroxyethyl acrylate 2 mol 2.8, a polyurethane prep'd. by reacting 2,2,4-trimethylhexamethylene diisocyanate 11 mol with triethylene glycol 10 mol and then with hydroxyethyl methacrylate 2 mol 2.8, 9-phenylacridine 0.2, 3-mercaptopropionic acid 2,4-dichloroanilide 0.1, a blue azo dye 0.035, the ester of diethylene glycol mono-2-ethylhexyl ether with 2,6-dihydroxybenzoic acid 2.8,  $\text{MeCOEt}_3$  35, and  $\text{EtOH}$  2g was coated on a biaxially oriented and heat-fixed poly(ethylene terephthalate) support at 28 g/m<sup>2</sup> (dry), then laminated to a Cu-laminated phenolic plate, imagewise exposed, spray developed with 0.8%  $\text{Na}_2\text{CO}_3$ , washed, etched, and galvanized. The plate showed no undercutting or damage.

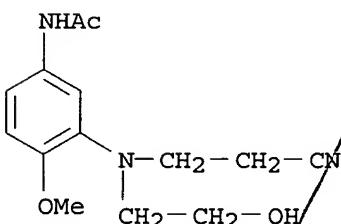
IT 22588-78-9D, reaction products with chlorodinitrobenzenediazonium salts

RL: USES (Uses)

(photopolymerizable compns. contg. unsatd. polyurethanes and, for printing plates and photoresists)

RN 22588-78-9 CAPLUS

CN Acetamide, N-[3-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]-(9CI) (CA INDEX NAME)



IC C08F020-36; G03C001-70

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic Processes)

ST urethane photopolymer printing plate photoresist; polyurethane printing plate photoresist

IT Printing plates

(photopolymerizable compns. contg. unsatd. polyurethane for fabrication of)

IT Resists

(photo-, photopolymerizable compns. contg. unsatd. polyurethane for)

IT Urethane polymers, uses and miscellaneous

RL: USES (Uses)

(unsatd., photopolymerizable compns. contg., for printing plates and photoresists)

IT 602-56-2 5153-25-3 22588-78-9D, reaction products with

chlorodinitrobenzenediazonium salts 41137-60-4 58601-54-0  
58622-64-3D, salts, reaction products with 60466-57-1 67584-73-0  
73655-03-5

RL: USES (Uses)

(photopolymerizable compns. contg. unsatd. polyurethanes and, for  
printing plates and photoresists)

IT 73539-63-6 73681-84-2 73681-85-3 73681-86-4 73681-87-5  
73681-88-6

RL: USES (Uses)

(photopolymerizable compns. contg., for printing plates and  
photoresists)

L19 ANSWER 52 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1980:207138 CAPLUS

DOCUMENT NUMBER: 92:207138

TITLE: Photopolymerizable mixture

INVENTOR(S): Faust, Raimund Josef; Lehmann, Peter

PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 35 pp.

CODEN: GWXXBX

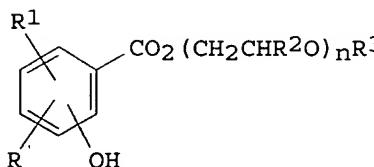
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2822191	A1	19791122	DE 1978-2822191	19780520
EP 6125	A1	19800109	EP 1979-101411	19790509
EP 6125	B1	19830511		
R: BE, CH, DE, FR, GB, IT, NL, SE				
CA 1128802	A1	19820803	CA 1979-327826	19790517
JP 54153623	A2	19791204	JP 1979-60573	19790518
JP 62045968	B4	19870930		
PRIORITY APPLN. INFO.:			DE 1978-2822191	19780520
GI				



I

AB Photopolymerizable compns. for use as photoresists and in the fabrication of printing plates are composed of a binder that is sol. or swellable in aq. alk. soln., an addn. polymerizable compd. with .gtoreq.2 acrylic acid or methacrylic acid ester groups and a b.p. >100.degree., a photoinitiator, and a plasticizer having the formula I (R = H, halogen,

C1-4 alkyl; R1 = H, OH, C1-4 alkyl; R2 = H, Me; R3 = C1-20 alkyl or alkenyl and contains .gtoreq.4 C atoms when n = 0 or 1; n = 0-20). The compns. give developed images which adhere well to metal supports and are resistant to etching solns. Thus, a photopolymerizable compn. contg. hexyl methacrylate-methacrylic acid-styrene copolymer (60:30:10 wt parts; av. mol wt 35,000) 6.5, a diurethane prep'd. by reaction of 2,2,4-trimethylhexamethylene diisocyanate 1 mol with hydroxymethyl acrylate 2 mol 2.8, a polyurethane prep'd. by reacting 2,2,4-trimethylhexamethylene diisocyanate 11 mol with triethylene glycol 10 mol and then with hydroxyethyl methacrylate 2 mol 2.8, 9-phenylacridine 0.2, 3-mercaptopropionic acid 2,4-dichloroanilide 0.1, a blue azo dye 0.035, the ester of diethylene glycol mono-2-ethylhexyl ether with 2,6-dihydroxybenzoic acid 2.8, MeCOEt 35, and EtOH 2 g was coated on a biaxial oriented and heat-fixed PET support at 28 g/m<sup>2</sup> (dry), laminated on a Cu-laminated phenolic plate, imagewise exposed, spray developed with 0.8% Na<sub>2</sub>CO<sub>3</sub>, washed, etched, and galvanized. The plate showed no undercutting or damage.

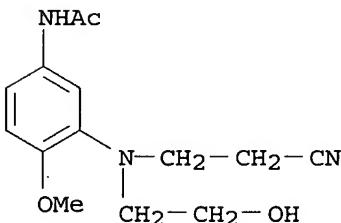
IT 22588-78-9D, reaction products with chlorodinitrobenzenediazonium salts

RL: USES (Uses)

(photopolymerizable compns. contg. hydroxybenzoic acid deriv. ester plasticizers and, for photoresists and printing plates)

RN 22588-78-9 CAPLUS

CN Acetamide, N-[3-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]-(9CI) (CA INDEX NAME)



IC C08F020-20; G03C001-68

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic Processes)

ST glycol ether hydroxybenzoate plasticizer photoresist; photopolymer glycol ether benzoate plasticizer; printing plate prodn photopolymer

IT Plasticizers

(hydroxybenzoic acid deriv. esters as, for photopolymerizable compns. for photoresists and printing plates)

IT Printing plates

(photopolymerizable compns. for, contg. hydroxybenzoic acid deriv. esters as plasticizers)

IT Resists

(photo-, photopolymerizable compns. for, contg. hydroxybenzoic acid deriv. esters as plasticizers)

IT Urethane polymers, uses and miscellaneous

RL: USES (Uses)

(unsatd., photopolymerizable compns. contg., for photoresists and

printing plates)

IT 602-56-2 22588-78-9D, reaction products with  
chlorodinitrobenzenediazonium salts 58601-54-0 58622-64-3D, reaction  
products with acetamido(cyanoethyl)(hydroxyethyl)methoxyaniline  
60466-57-1 67584-73-0 73539-63-6 73539-65-8  
RL: USES (Uses)  
(photopolymerizable compns. contg. hydroxybenzoic acid deriv. ester  
plasticizers and, for photoresists and printing plates)

IT 5153-25-3 29656-58-4D, derivs., esters 64524-57-8 73639-18-6  
73639-19-7 73639-20-0 73639-21-1 73639-22-2 73639-23-3  
73639-24-4 73639-25-5 73639-26-6 73651-70-4 73651-71-5  
73651-72-6 73689-04-0 73689-07-3  
RL: MOA (Modifier or additive use); USES (Uses)  
(plasticizer, for photopolymerizable compns. for photoresists and  
printing plates)

L19 ANSWER 53 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1980:189246 CAPLUS  
DOCUMENT NUMBER: 92:189246  
TITLE: Photosensitive compositions and their applications  
PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54153625	A2	19791204	JP 1979-60575	19790518
JP 62039418	B4	19870822		
DE 2822189	A1	19800417	DE 1978-2822189	19780520
EP 6124	A1	19800109	EP 1979-101409	19790509
EP 6124	B1	19821222		

R: BE, CH, DE, FR, GB, IT, NL, SE

CA 1129237 A1 19820810 CA 1979-327828 19790517

PRIORITY APPLN. INFO.: DE 1978-2822189 19780520

AB A satd. polyurethane of the formula  $RZ_02CNH_2Z_1(NHCO_2Z_2CONH_2Z_1)_nNHCO_2Z_2R$  [Z =  $-(CH_2CHR_1O)_p-$ ; Z1 = C2-12 satd. aliph. or alicyclic divalent moiety; Z2 =  $-(CH_2CHR_2O)_m$ ,  $-(CH_2CHR_2S)_m-1CH_2CHR_2O-$ ,  $(-CH_2)_kO-$ ,  $-CrH_2r-2O-$ ; R = C1-20 satd. aliph. moiety, CONHR3; R1, R2 = H, Me; R3 = C1-20 satd. aliph. moiety; n = 0-15; m = 2-4; p = 0-4; k = 2-12; r = 4-12; n + p = 1-19; when p = 0, R = C1-20 satd. aliph. moiety; when n = 0, R = CONHR3] is added to a photosensitive compn. contg. an alkali-sol. or -swelling polymer binder, a photopolyrn. initiator, and an addn.-polymerizable compd. having .gtoreq.2 end acrylic or methacrylic ester groups and b.p. .gtoreq.100.degree.. The addn. of the urethane polymer improves the adhesion of the compn. with the support, esp. with the metallic supports. The compn. is therefore useful as resist or for relief printing plate. Thus, hexyl methacrylate-methacrylic acid-styrene copolymer 6.5, a polymerizable polyurethane (prepd. by reacting 2,2,4-

trimethylhexamethylene diisocyanate with triethylene glycol and subsequently with 2-hydroxyethyl methacrylate) 2.5, 4-hydroxy-2-ethylhexyl benzoate 2.8, 9-phenylacridine 0.2, 3-mercaptopropionic acid 2,4-dichloroanilide 0.1, Disperse Red C.I. 179 0.025, and a satd. polyurethane (prepd. by reacting 2,2,4-trimethylhexamethylene diisocyanate 2 mol with triethylene glycol 1 mol, and subsequently with triethylene glycol monobutyl ether 2 mol) 2.8 g were dissolved in MeCOEt-EtOH mixt. and coated on a poly(ethylene terephthalate) film support. The film was laminated on a Cu laminate, imagewise exposed, the film support was peeled off, and the resin layer was developed with 0.8% Na<sub>2</sub>CO<sub>3</sub> soln. The Cu layer was etched, then electroplated with Cu (20 .mu.), Ni (6 .mu.), and Au (2.5 .mu.), then the remaining resist was removed and the bared Cu was etched to give a printed circuit.

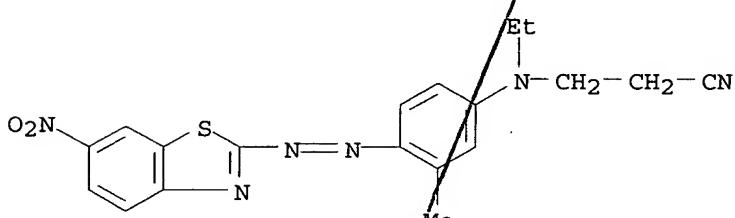
IT 16586-42-8

RL: USES (Uses)

(photosensitive resin compns. contg., for photoresists)

RN 16586-42-8 CAPLUS

CN Propanenitrile, 3-[ethyl[3-methyl-4-[(6-nitro-2-benzothiazolyl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)



IC C08F299-06; C08F002-46; C08F020-22; G03C001-68

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
Section cross-reference(s): 76

ST photoresist resin/polyurethane acrylic polymer; printed circuit  
photoresist; photoresist compn

IT Acrylic polymers, uses and miscellaneous  
Urethane polymers, uses and miscellaneous

RL: USES (Uses)

(photosensitive resin compns. contg., for photoresists)

IT Resists

(photo-, photosensitive resin compns. contg. acrylic and urethane  
polymers)

IT 602-56-2 5153-25-3 16586-42-8 58601-54-0 60466-57-1  
73539-63-6 73539-64-7 73539-65-8 73539-66-9 73539-67-0  
73546-08-4 73546-34-6 73546-35-7 73546-36-8

RL: USES (Uses)

(photosensitive resin compns. contg., for photoresists)

L19 ANSWER 54 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1979:602253 CAPLUS

DOCUMENT NUMBER: 91:202253

TITLE: Transferable photoresist

INVENTOR(S): Franke, Werner; Seibel, Markus  
 PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.  
 SOURCE: Ger. Offen., 12 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2758575	A1	19790705	DE 1977-2758575	19771229
JP 54092724	A2	19790723	JP 1978-156949	19781221
JP 61056498	B4	19861202		
GB 2012976	A	19790801	GB 1978-49725	19781221
GB 2012976	B2	19820415		
FR 2413688	A1	19790727	FR 1978-36418	19781227
FR 2413688	B1	19840120		
US 4389480	A	19830621	US 1981-224230	19810112
PRIORITY APPLN. INFO.:			DE 1977-2758575	19771229
			US 1978-972817	19781226

AB A photoresist which is easily separable from a temporary support without tearing or distortion is fabricated with a temporary support which has an adhesion to the resist  $\geq 70$  g/100 mm and whose other side has an adhesion at least 8 g/100 mm greater than this. Thus, a support of poly(ethylene terephthalate) 23- $\mu$  thick was treated on 1 side in a 10% aq.  $\text{C13CCO}_2\text{H}$  soln. and dried at 135.degree., the treated side was then coated with a soln. of the reaction product of 1 mol 2,2,4-trimethylhexamethylene diisocyanate and 2 mol hydroxyethyl methacrylate 173, a hexyl methacrylate-methacrylic acid-styrene terpolymer 200, 9-phenylacridine 6.1, Michler's Ketone 0.4, triethyleneglycol dimethacrylate 4.6, and a blue dye 1.0 g from the reaction of 2,4-dinitro-6-chlorobenzenediazonium salt with 2-methoxy-5-acetylamo-N-cyanoethyl-N-hydroxyethylaniline, and the coated support was heated at 135.degree. to give a transferable photoresist.

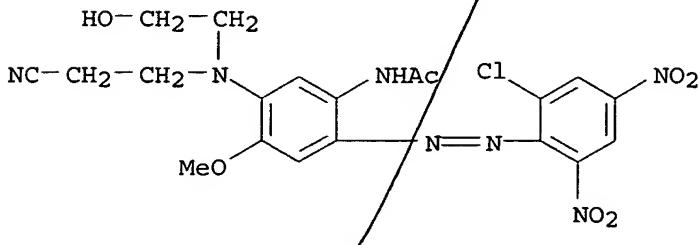
IT 23807-28-5

RL: USES (Uses)

(photoresists compns. contg. acrylic polymer, unsatd. urethane, and, transferable)

RN 23807-28-5 CAPLUS

CN Acetamide, N-[2-[(2-chloro-4,6-dinitrophenyl)azo]-5-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



IC G03C005-50; G03F007-10  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
ST urethane unsatd transferable photoresist; acrylic polymer transferable photoresist  
IT Acrylic polymers, uses and miscellaneous  
RL: USES (Uses)  
    (photoresists compns. contg., transferable)  
IT Resists  
    (photo-, transferable, contg. acrylic polymer and unsatd. urethane)  
IT 90-94-8 109-16-0 602-56-2 23807-28-5  
RL: USES (Uses)  
    (photoresists compns. contg. acrylic polymer, unsatd. urethane, and, transferable)  
IT 41137-60-4 58601-54-0 71903-30-5  
RL: USES (Uses)  
    (photoresists compns. contg., transferable)

L19 ANSWER 55 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1976:82579 CAPLUS  
DOCUMENT NUMBER: 84:82579  
TITLE: Photoresist compositions  
INVENTOR(S): Faust, Raimund J.  
PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.  
SOURCE: Ger. Offen., 48 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2361041	A1	19750612	DE 1973-2361041	19731207
DE 2361041	B2	19791206		
DE 2361041	C3	19800814		
SE 7415009	A	19780116	SE 1974-15009	19741129
SE 395971	B	19770829		
SE 395971	C	19780427		
US 4019972	A	19770426	US 1974-528836	19741202
BE 822945	A1	19750604	BE 1974-151155	19741204
FR 2254044	A1	19750704	FR 1974-39666	19741204
FR 2254044	B1	19820514		
CH 602985	A	19780815	CH 1974-16111	19741204
JP 50092124	A2	19750723	JP 1974-140068	19741205
JP 58049860	B4	19831107		
GB 1491695	A	19771109	GB 1974-52693	19741205
CA 1044939	A1	19781226	CA 1974-215294	19741205
PRIORITY APPLN. INFO.:		DE 1973-2361041		19731207
AB	Photopolymerizable copying compns. which give at room temp. nontacky, flexible, copying layers with very little cold flow are composed of .gtoreq.1 binder, .gtoreq.1 photoinitiator, and .gtoreq.1 nonvolatile (at			

100.degree.) photopolymerizable amide group-contg. acrylic or alkylacrylic acid deriv. with .gtoreq.2 polymerizable groups/mol. These compns. are readily developed in aq. alk. solns. Thus, a soln. contg. an acrylonitrile-Et acrylate-2-ethylhexyl methacrylate-methacrylic acid (30:20:175:95) polymer 6.4, trialkylene glycol dimethacrylate 0.15, 9-phenylacridine 0.2, Michler's ketone 0.015, an azo dye prep'd. through coupling of a 2,4-dinitro-6-chlorobenzenediazonium salt with 2-methoxy-5-acetamido-N-cyanoethyl-N-hydroxyethylaniline 0.065, ethylene glycol monoethyl ether 20, MeCOEt 10, and (CH<sub>2</sub>=C(Me)CO<sub>2</sub>C<sub>2</sub>H<sub>4</sub>O<sub>2</sub>CNHC<sub>6</sub>H<sub>12</sub>NHCO) 2NC<sub>6</sub>H<sub>12</sub>NHCO<sub>2</sub>C<sub>2</sub>H<sub>4</sub>O<sub>2</sub>CC(Me)=CH<sub>2</sub> 5.6g was coated on a biaxially oriented poly(ethylene terephthalate) foil, and dried at 100.degree. to give a coating wt. 13.4 g/m<sup>2</sup>. This dry resist foil was then laminated to a Cu-coated circuit board, and exposed to a Xe lamp at 80 cm using a test plate with a line width from 4 mm down to 5.mu.. The exposed layer was developed in an aq. alk. soln. for 1.5 min and sprayed with water to give a true copy with line dimensions down to 5.mu..

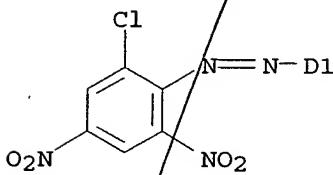
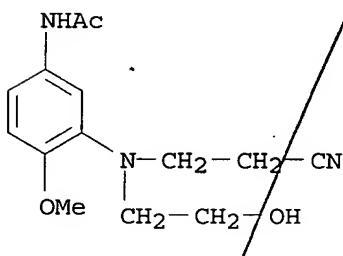
IT 58338-67-3

RL: USES (Uses)

(photopolymerizable compns. contg. acrylic group-contg. urethanes, acrylic polymers, and, for alkali-developable photoresists)

RN 58338-67-3 CAPLUS

CN Acetamide, N-[[[2-chloro-4,6-dinitrophenyl)azo]-3-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)



IC G03C; G03F

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic Processes)

ST acrylic polymer photoresist; resist photo acrylic polymer; urethane alk developable photoresist

IT Urethanes

RL: USES (Uses)

(acrylic group-contg., photopolymerizable compns. contg. acrylic polymers and, for alkali-developable photoresists)

IT Resists

(photo-, alkali-developable, photopolymerizable compns. contg. acrylic

polymers for)  
IT Acrylic polymers  
RL: USES (Uses)  
(photopolymerizable compns. contg., for photoresists)  
IT Electric circuits  
(printed, acrylic polymer-based photoresist compns. for manuf. of)  
IT 58336-21-3 58337-75-0  
RL: USES (Uses)  
(photopolymerizable compns. contg. acrylic group-contg. urethanes and,  
for alkali-developable photoresists)  
IT 109-16-0 58338-67-3  
RL: USES (Uses)  
(photopolymerizable compns. contg. acrylic group-contg. urethanes,  
acrylic polymers, and, for alkali-developable photoresists)  
IT 41137-60-4 41973-77-7 58337-76-1 58337-77-2 58337-78-3  
58337-79-4 58337-80-7 58337-81-8 58337-82-9 58337-83-0  
RL: USES (Uses)  
(photopolymerizable compns. contg. acrylic monomers, acrylic polymers,  
and, for alkali-developable photoresists)  
IT 90-94-8 602-56-2  
RL: USES (Uses)  
(photosensitizer, photopolymerizable compns. contg. acrylic  
group-contg. urethanes, acrylic polymers, and, for alkali-developable  
photoresists)

L19 ANSWER 56 OF 56 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1973:454856 CAPLUS  
DOCUMENT NUMBER: 79:54856

TITLE: Synthesis and study of some characteristics of monoazo  
dyes which contain nitril groups

AUTHOR(S): Dudko, O. V.; Lashko, L. V.; Lomakina, O. I.; Shvidka,  
L. A.

CORPORATE SOURCE: USSR

SOURCE: Vestnik Khar'kovskogo Politekhnicheskogo Instituta  
(1971), No. 60, 44-7  
CODEN: VEPIBL; ISSN: 0453-7998

DOCUMENT TYPE: Journal

LANGUAGE: Ukrainian

AB The diazo coupling of N-.beta.-cyanoethyl-N-ethylaniline [148-87-8]  
] with Azoamine-Brilliant Red K (I) [39378-24-0] gave a dye which was used  
for dyeing acetate or Capron fibers. The dye resists washing,  
sweat, and is lightfast. Similarly, 2-phenylaminopropionitrile [  
1075-76-9] and N-.beta.-cyanoethyl-N-methylaniline [  
94-34-8] were coupled with I to give dyes contg. CN groups.

Besides I, 14 other azoamines were coupled with the CN group-contg.  
anilines giving monoazo dyes similar to the above-indicated dyes.

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

ST azo dye polyamide fiber; acetate silk azo dye; cyanoaniline coupling  
azoamine

IT Dyes, azo

(N-(cyanoalkyl)aniline derivs.)

IT 94-34-8 148-87-8 1075-76-9

RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling of, with diazotized amines)

IT 31463-99-7P 31464-38-7P 31482-56-1P 42379-26-0P 42379-28-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

IT 97-52-9 100-01-6 39378-24-0 39434-36-1 39434-37-2 39434-38-3

RL: USES (Uses)

(reaction of diazotized, with anilinopropionitrile and its derivs.)



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6	NPL	36

Total number of pages: 138

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